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(54) **GESTURE-BASED COMMUNITY MODERATION**

6,385,611 B1 5/2002 Cardona
6,684,239 B1 1/2004 Flepp et al.
6,742,032 B1 5/2004 Castellani et al.

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(Continued)

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FOREIGN PATENT DOCUMENTS

CN 102054033 A 5/2011
CN 103177095 B 12/2015

(Continued)

OTHER PUBLICATIONS

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Anicas, Mitchell; An Introduction to OAuth 2, DigitalOcean, Published Jul. 21, 2014, Retrieved Jan. 29, 2021; <>

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(Continued)

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H04L 12/58 (2006.01)

(57) **ABSTRACT**

(52) **U.S. Cl.**
CPC **H04L 51/12** (2013.01); **H04L 51/14**
(2013.01); **H04L 51/22** (2013.01); **H04L 51/32**
(2013.01)

Various embodiments relate generally to data science and data analysis, computer software and systems to provide a platform to facilitate implementation of an interface as a computerized tool, among other things, and, more specifically, to a computing and data platform that implements logic to facilitate moderation of electronic messages, electronic postings, content, etc., via implementation of a moderator application configured to, for example, perform an action automatically. In some examples, a method may include activating at least a portion of a moderator application, receiving a user input signal configured to cause presentation of an electronic message at a user interface as a computerized tool, detecting subsets of values of a user input signal, assigning one or more states to an electronic message, and causing execution of instructions to perform a moderated action automatically responsive to transitioning an electronic message from a first state to a second state.

(58) **Field of Classification Search**
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G09G 2320/0666; G09G 2354/00; G09G
2310/0251; G09G 2310/04; G09G
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G06T 7/90

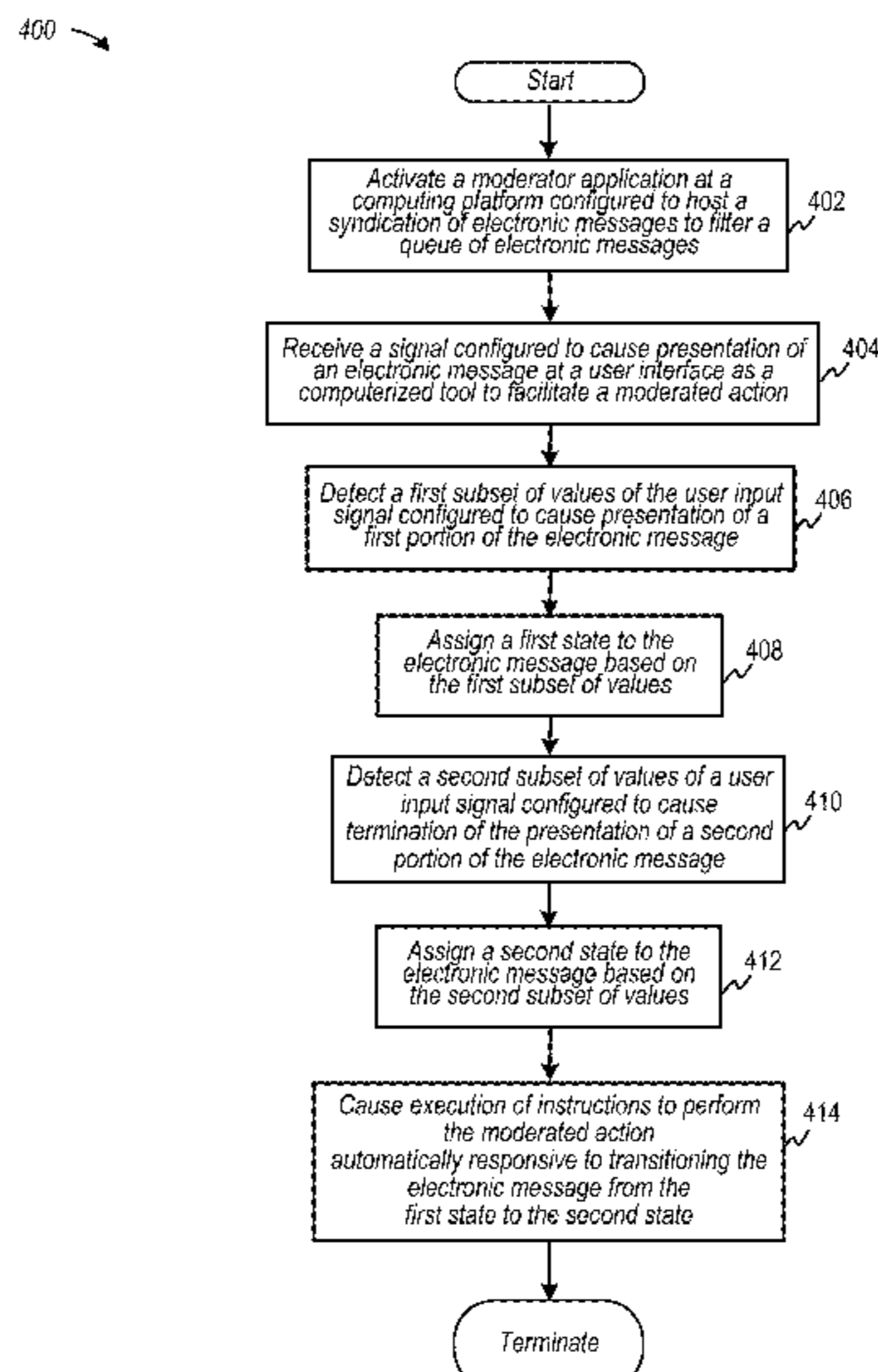
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,041,311 A 3/2000 Chislenko et al.
6,146,026 A 11/2000 Ushiku

19 Claims, 12 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

6,871,232 B2	3/2005	Curie et al.	2001/0037469 A1	11/2001	Gupta et al.
7,032,030 B1	4/2006	Codignotto	2001/0042087 A1	11/2001	Kephart et al.
7,222,156 B2	5/2007	Gupta et al.	2001/0047290 A1	11/2001	Petras et al.
7,409,710 B1	8/2008	Uchil et al.	2002/0010746 A1	1/2002	Jilk et al.
7,606,865 B2	10/2009	Kumar et al.	2002/0049793 A1	4/2002	Okumura et al.
7,644,057 B2	1/2010	Nelken et al.	2002/0070953 A1	6/2002	Barg et al.
7,702,541 B2	4/2010	Black et al.	2002/0105545 A1	8/2002	Carter et al.
7,725,492 B2	5/2010	Sittig et al.	2002/0144156 A1	10/2002	Copeland
7,751,620 B1	7/2010	Cosoi	2003/0005103 A1	1/2003	Narad et al.
7,756,926 B2	7/2010	Tseng et al.	2003/0028525 A1	2/2003	Santos et al.
7,792,948 B2	9/2010	Zhao et al.	2003/0078959 A1	4/2003	Yeung et al.
7,818,758 B2	10/2010	Bonet et al.	2003/0128203 A1	7/2003	Marshall et al.
7,831,912 B2 *	11/2010	King G06F 16/434 715/708	2003/0135565 A1	7/2003	Estrada
7,979,369 B2	7/2011	Grenier et al.	2003/0187871 A1	10/2003	Amano et al.
8,006,187 B1	8/2011	Bailey et al.	2003/0225850 A1	12/2003	Teague
8,027,931 B2	9/2011	Kalaboukis	2004/0049673 A1	3/2004	Song et al.
8,082,308 B1	12/2011	Filev	2004/0073666 A1	4/2004	Foster et al.
8,131,745 B1	3/2012	Hoffman et al.	2004/0133697 A1	7/2004	Mamaghani et al.
8,171,128 B2	5/2012	Zuckerberg et al.	2004/0174397 A1	9/2004	Cereghini et al.
8,200,527 B1	6/2012	Thompson et al.	2005/0060643 A1	3/2005	Glass et al.
8,225,376 B2	7/2012	Zuckerberg et al.	2005/0074126 A1	4/2005	Stanko
8,286,154 B2	10/2012	Kaakani et al.	2005/0132348 A1	6/2005	Meulemans et al.
8,321,300 B1	11/2012	Bockius et al.	2005/0206644 A1	9/2005	Kincaid
8,412,657 B2	4/2013	Grenier et al.	2005/0283614 A1	12/2005	Hardt
8,437,369 B2	5/2013	Shaikli	2006/0010215 A1	1/2006	Clegg et al.
8,505,069 B1	8/2013	Solodovnikov et al.	2006/0036685 A1	2/2006	Canning et al.
8,606,792 B1	12/2013	Jackson et al.	2006/0129602 A1	6/2006	Witriol et al.
8,615,442 B1	12/2013	Kapur et al.	2006/0143307 A1	6/2006	Codignotto
8,752,041 B2	6/2014	Akiyoshi et al.	2006/0155581 A1	7/2006	Eisenberger et al.
8,769,417 B1	7/2014	Robinson et al.	2006/0185021 A1	8/2006	Dujari et al.
8,813,125 B2 *	8/2014	Reisman H04N 21/482 725/34	2006/0206578 A1	9/2006	Heidloff et al.
8,825,515 B1	9/2014	Hanson	2006/0294196 A1	12/2006	Feirouz et al.
8,886,580 B2	11/2014	Grenier et al.	2007/0083536 A1	4/2007	Darnell et al.
8,892,524 B1	11/2014	Lee et al.	2007/0118889 A1	5/2007	Fredell
8,972,428 B2	3/2015	Dicker et al.	2007/0136354 A1	6/2007	Chen
9,021,361 B1	4/2015	Pettinati et al.	2007/0171716 A1	7/2007	Wright et al.
9,105,044 B2	8/2015	Wu	2007/0226177 A1	9/2007	Barsness et al.
9,131,382 B1	9/2015	Johns	2007/0240119 A1	10/2007	Ducheneaut et al.
9,141,997 B2	9/2015	Gaedcke et al.	2007/0282800 A1	12/2007	England et al.
9,143,478 B2	9/2015	Ramaswamy	2007/0286528 A1	12/2007	Podilchuk
9,229,702 B1	1/2016	Kapulkin et al.	2007/0289006 A1	12/2007	Ramachandran et al.
9,251,360 B2 *	2/2016	Meyer G06F 21/62	2008/0005284 A1	1/2008	Ungar et al.
9,282,098 B1	3/2016	Hitchcock et al.	2008/0033776 A1	2/2008	Marchese
9,311,683 B1	4/2016	Saylor et al.	2008/0034058 A1	2/2008	Korman et al.
9,325,696 B1	4/2016	Balfanz et al.	2008/0040673 A1	2/2008	Zuckerberg et al.
9,338,186 B2	5/2016	Wollenstein et al.	2008/0103906 A1	5/2008	Singh
9,369,454 B2 *	6/2016	Porzio G06Q 10/10	2008/0109245 A1	5/2008	Gupta
9,378,295 B1	6/2016	Marra et al.	2008/0109491 A1	5/2008	Gupta
9,483,802 B2	11/2016	Gaedcke et al.	2008/0120379 A1	5/2008	Malik
9,501,746 B2	11/2016	Prakash	2008/0126476 A1	5/2008	Nicholas et al.
9,509,742 B2	11/2016	Gordon	2008/0133488 A1	6/2008	Bandaru et al.
9,514,459 B1	12/2016	Doshi et al.	2008/0178125 A1	7/2008	Elsbree et al.
9,519,723 B2	12/2016	Lorenz et al.	2008/0189406 A1	8/2008	Shen
9,596,206 B2	3/2017	Bueno et al.	2008/0201344 A1	8/2008	Levergood et al.
9,619,531 B2	4/2017	Wu	2008/0215591 A1	9/2008	Howard et al.
9,654,450 B2 *	5/2017	Ford H04L 63/08	2008/0221870 A1	9/2008	Attardi et al.
9,756,098 B2	9/2017	Kazerani et al.	2008/0225848 A1	9/2008	Pilon et al.
9,787,664 B1	10/2017	Subbiah et al.	2008/0263603 A1	10/2008	Murray et al.
9,800,639 B2	10/2017	Gordon	2008/0294680 A1	11/2008	Powell et al.
9,953,063 B2	4/2018	Spasojevic et al.	2008/0306830 A1	12/2008	Lasa et al.
10,084,838 B2	9/2018	Gordon et al.	2009/0013043 A1	1/2009	Tan
10,142,386 B2	11/2018	Gordon	2009/0043852 A1	2/2009	Weir et al.
10,178,173 B2	1/2019	Kadowaki et al.	2009/0089657 A1	4/2009	Davis
10,180,971 B2	1/2019	Bhave et al.	2009/0106080 A1	4/2009	Carrier et al.
10,188,905 B2	1/2019	Dohlen	2009/0132311 A1	5/2009	Klinger et al.
10,264,042 B2	4/2019	Gordon	2009/0138472 A1	5/2009	MacLean
10,264,073 B2	4/2019	Kadowaki et al.	2009/0144723 A1	6/2009	Hartin et al.
10,284,723 B1	5/2019	Neuer, III et al.	2009/0157667 A1	6/2009	Brougher et al.
10,491,490 B2	11/2019	Sridhar et al.	2009/0157708 A1	6/2009	Bandini et al.
10,594,773 B2	3/2020	Falcao et al.	2009/0157899 A1	6/2009	Gagliardi et al.
10,855,657 B2	12/2020	Senfleber et al.	2009/0158265 A1	6/2009	Davis et al.
10,931,540 B2	2/2021	Davis et al.	2009/0177670 A1	7/2009	Grenier et al.
2001/0025253 A1	9/2001	Heintz et al.	2009/0181649 A1	7/2009	Bull et al.
			2009/0210282 A1	8/2009	Elenbaas et al.
			2009/0249451 A1	10/2009	Su et al.
			2009/0292608 A1	11/2009	Polachek
			2009/0292722 A1	11/2009	Ayloo
			2009/0300036 A1	12/2009	Nagasaki
			2010/0071052 A1	3/2010	Mao et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

2010/0082503	A1	4/2010	Kantak et al.	2013/0291058	A1	10/2013	Wollenstein et al.
2010/0106730	A1	4/2010	Aminian et al.	2013/0298038	A1	11/2013	Spivack et al.
2010/0119053	A1	5/2010	Goeldi	2013/0304726	A1	11/2013	Sandulescu et al.
2010/0121707	A1	5/2010	Goeldi	2013/0304758	A1	11/2013	Gruber et al.
2010/0121843	A1	5/2010	Goeldi	2013/0318156	A1	11/2013	Friedman et al.
2010/0153516	A1	6/2010	Weinberg et al.	2013/0332263	A1	12/2013	Vora et al.
2010/0169148	A1	7/2010	Oberhofer et al.	2014/0006524	A1	1/2014	Singh et al.
2010/0205663	A1	8/2010	Ward et al.	2014/0032306	A1	1/2014	Sukornyk et al.
2010/0223341	A1	9/2010	Manolescu et al.	2014/0040275	A1	2/2014	Dang et al.
2010/0246797	A1	9/2010	Chavez et al.	2014/0040377	A1	2/2014	Friedman et al.
2010/0250683	A1	9/2010	Hoyne et al.	2014/0040993	A1	2/2014	Lorenzo et al.
2010/0274732	A1	10/2010	Grinchenko et al.	2014/0047429	A1	2/2014	Gaither et al.
2010/0281258	A1	11/2010	Andress et al.	2014/0067520	A1	3/2014	Campanile
2010/0287512	A1	11/2010	Gan et al.	2014/0074844	A1	3/2014	Subramanian et al.
2010/0306122	A1	12/2010	Shaffer	2014/0082072	A1	3/2014	Kass et al.
2010/0306528	A1	12/2010	Andress et al.	2014/0108675	A1	4/2014	Wu
2010/0312769	A1	12/2010	Bailey et al.	2014/0164352	A1	6/2014	Denninghoff
2011/0004922	A1	1/2011	Bono et al.	2014/0173444	A1	6/2014	Wu
2011/0055217	A1	3/2011	Kamel et al.	2014/0173501	A1	6/2014	Wu
2011/0055264	A1	3/2011	Sundelin et al.	2014/0173509	A1	6/2014	Wu
2011/0077988	A1	3/2011	Cates et al.	2014/0181087	A1	6/2014	Wu
2011/0113041	A1	5/2011	Hawthorne et al.	2014/0181194	A1	6/2014	Sullivan
2011/0119593	A1	5/2011	Jacobson et al.	2014/0181728	A1	6/2014	Wu
2011/0125826	A1	5/2011	Erhart et al.	2014/0184841	A1	7/2014	Woo et al.
2011/0144801	A1	6/2011	Selker et al.	2014/0189808	A1	7/2014	Mahaffey et al.
2011/0153603	A1	6/2011	Adiba et al.	2014/0200989	A1	7/2014	Kassko et al.
2011/0197146	A1	8/2011	Goto et al.	2014/0222834	A1	8/2014	Parikh et al.
2011/0212430	A1	9/2011	Smithmier et al.	2014/0223527	A1	8/2014	Bortz et al.
2011/0219087	A1	9/2011	Jorasch et al.	2014/0244621	A1	8/2014	Lindsay
2011/0246513	A1	10/2011	Covannon et al.	2014/0278785	A1	9/2014	Gaedcke et al.
2011/0283366	A1	11/2011	Kwon et al.	2014/0280113	A1	9/2014	Hohwald
2011/0289574	A1	11/2011	Hull et al.	2014/0280398	A1	9/2014	Smith et al.
2011/0302653	A1	12/2011	Frantz et al.	2014/0289034	A1	9/2014	Wu
2012/0036080	A1	2/2012	Singer et al.	2014/0298199	A1	10/2014	Johnson, Jr. et al.
2012/0054135	A1	3/2012	Salaka et al.	2014/0304249	A1	10/2014	Ayzenshtat et al.
2012/0076367	A1	3/2012	Tseng	2014/0324902	A1	10/2014	Morris et al.
2012/0077158	A1	3/2012	Jastrzembski et al.	2014/0337953	A1	11/2014	Banatwala et al.
2012/0089706	A1	4/2012	Collins et al.	2014/0358911	A1	12/2014	McCarthy et al.
2012/0095861	A1	4/2012	Feng et al.	2015/0006708	A1	1/2015	Banke et al.
2012/0102021	A1	4/2012	Hill et al.	2015/0032492	A1	1/2015	Ting et al.
2012/0117059	A1	5/2012	Bailey et al.	2015/0032751	A1	1/2015	Ting et al.
2012/0131653	A1	5/2012	Pasquero et al.	2015/0039705	A1	2/2015	Kursun
2012/0158632	A1	6/2012	Grenier et al.	2015/0067160	A1	3/2015	Sridhar et al.
2012/0195422	A1	8/2012	Famous	2015/0100537	A1	4/2015	Grieves et al.
2012/0198197	A1	8/2012	Gladwin et al.	2015/0112918	A1	4/2015	Zheng et al.
2012/0208568	A1	8/2012	Cooley	2015/0120713	A1	4/2015	Kim et al.
2012/0210119	A1	8/2012	Baxter et al.	2015/0127453	A1	5/2015	Tew et al.
2012/0232953	A1	9/2012	Custer	2015/0134457	A1	5/2015	Cheung et al.
2012/0254321	A1	10/2012	Lindsay et al.	2015/0134579	A1	5/2015	Zaman et al.
2012/0265806	A1	10/2012	Blanchflower et al.	2015/0142748	A1	5/2015	Gottemukkula et al.
2012/0271729	A1	10/2012	Vincelette et al.	2015/0161211	A1	6/2015	Patel et al.
2012/0284155	A1	11/2012	Holten et al.	2015/0170294	A1	6/2015	Goyal et al.
2012/0290605	A1	11/2012	Ickman et al.	2015/0188907	A1	7/2015	Khalid et al.
2012/0303659	A1	11/2012	Erhart et al.	2015/0193504	A1	7/2015	Naidu et al.
2012/0317198	A1	12/2012	Patton et al.	2015/0244706	A1	8/2015	Grajek et al.
2013/0007121	A1	1/2013	Fontenot et al.	2015/0281227	A1	10/2015	Ivey et al.
2013/0018957	A1	1/2013	Parnaby et al.	2015/0286643	A1	10/2015	Kumar et al.
2013/0024522	A1	1/2013	Pierre et al.	2015/0288522	A1	10/2015	McCoy et al.
2013/0050747	A1	2/2013	Cok et al.	2015/0295869	A1	10/2015	Li et al.
2013/0066876	A1	3/2013	Raskino et al.	2015/0310018	A1	10/2015	Fan et al.
2013/0110946	A1	5/2013	Bradshaw	2015/0310020	A1	10/2015	Brav et al.
2013/0116044	A1	5/2013	Schwartz	2015/0310571	A1	10/2015	Brav et al.
2013/0138428	A1	5/2013	Chandramouli et al.	2015/0312200	A1	10/2015	Brav et al.
2013/0138742	A1	5/2013	Dziubinski	2015/0334102	A1	11/2015	Haugnes
2013/0159472	A1	6/2013	Newton et al.	2015/0347616	A1	12/2015	Levi et al.
2013/0198260	A1	8/2013	Dow et al.	2015/0381552	A1	12/2015	Vijay et al.
2013/0212349	A1	8/2013	Maruyama	2016/0019628	A1	1/2016	Udumudi et al.
2013/0218801	A1	8/2013	Rago	2016/0021097	A1	1/2016	Shrotri
2013/0218865	A1	8/2013	Angulo et al.	2016/0034551	A1	2/2016	Huang et al.
2013/0235069	A1*	9/2013	Ubillos G09G 5/026 345/594	2016/0042053	A1	2/2016	Webber
2013/0282417	A1	10/2013	Gaedcke et al.	2016/0055250	A1	2/2016	Rush
2013/0282594	A1	10/2013	Gaedcke et al.	2016/0055541	A1	2/2016	Calistri-Yeh
2013/0282603	A1	10/2013	Gaedcke et al.	2016/0057576	A1	2/2016	Kessler et al.
2013/0282722	A1	10/2013	Grenier et al.	2016/0073166	A1	3/2016	Hu et al.
				2016/0080445	A1	3/2016	Kazerani et al.
				2016/0110688	A1	4/2016	Knox et al.
				2016/0125157	A1	5/2016	Wu
				2016/0132904	A1	5/2016	Mondal et al.
				2016/0132973	A1	5/2016	Wu

(56)

References Cited

U.S. PATENT DOCUMENTS

2016/0134580 A1 5/2016 Castera et al.
 2016/0147760 A1 5/2016 Anandhavelu et al.
 2016/0151704 A1 6/2016 Wu
 2016/0164863 A1 6/2016 Hitchcock et al.
 2016/0203221 A1 7/2016 Rao et al.
 2016/0203523 A1 7/2016 Spasojevic et al.
 2016/0210555 A1 7/2016 Murphy et al.
 2016/0212100 A1 7/2016 Banerjee
 2016/0320926 A1 11/2016 Ganin et al.
 2016/0321261 A1 11/2016 Spasojevic et al.
 2016/0321562 A1 11/2016 Zeng
 2016/0321694 A1 11/2016 Vorozhtsov
 2016/0335572 A1 11/2016 Bennett et al.
 2016/0352667 A1 12/2016 Pickett et al.
 2017/0046112 A1* 2/2017 Keller H04N 7/147
 2017/0048237 A1 2/2017 Pfitzmann et al.
 2017/0132276 A1 5/2017 Saurabh et al.
 2017/0154356 A1 6/2017 Trevisiol et al.
 2017/0154366 A1 6/2017 Turgeman
 2017/0180294 A1 6/2017 Milligan et al.
 2017/0193546 A1 7/2017 Bennett et al.
 2017/0264619 A1 9/2017 Narayanaswamy et al.
 2017/0300490 A1 10/2017 Kachemir et al.
 2017/0344748 A1* 11/2017 Ghani G06F 16/25
 2017/0366636 A1 12/2017 Wang et al.
 2018/0027075 A1 1/2018 Schoeffler et al.
 2018/0041336 A1 2/2018 Keshava et al.
 2018/0053114 A1 2/2018 Adjaoute
 2018/0081983 A1 3/2018 Carru et al.
 2018/0091468 A1 3/2018 Yong et al.
 2018/0097802 A1 4/2018 Lander et al.
 2018/0115473 A1 4/2018 Sridhar et al.
 2018/0144389 A1 5/2018 Fredrich et al.
 2018/0152471 A1 5/2018 Jakobsson
 2018/0211285 A1 7/2018 Todasco et al.
 2018/0219830 A1 8/2018 O'Brien et al.
 2018/0295137 A1 10/2018 Zager et al.
 2018/0329565 A1 11/2018 Yeung et al.
 2018/0332079 A1 11/2018 Ashley et al.
 2018/0337907 A1 11/2018 Bhansali et al.
 2018/0337910 A1 11/2018 Gustavson et al.
 2018/0367484 A1 12/2018 Rodriguez et al.
 2019/0057204 A1 2/2019 Marcovecchio et al.
 2019/0114356 A1 4/2019 Senfleber et al.
 2019/0116137 A1 4/2019 Senfleber et al.
 2019/0116148 A1 4/2019 Senfleber et al.
 2019/0158610 A1 5/2019 Holzband et al.
 2019/0159166 A1 5/2019 Aggarwal et al.
 2019/0228093 A1 7/2019 Falcao et al.
 2019/0230151 A1 7/2019 Falcao et al.
 2019/0245751 A1 8/2019 Wong
 2019/0306248 A1 10/2019 Swarangi et al.
 2019/0347984 A1* 11/2019 Hintermeister G09G 3/3208
 2019/0354709 A1 11/2019 Brinskelle
 2020/0007530 A1 1/2020 Abdul et al.
 2020/0051120 A1 2/2020 Senfleber et al.
 2020/0053094 A1 2/2020 Kaube et al.
 2020/0099676 A1 3/2020 Desarda et al.
 2020/0104478 A1 4/2020 Chauhan
 2020/0120068 A1 4/2020 Senfleber et al.
 2020/0120095 A1 4/2020 Senfleber et al.
 2020/0120096 A1 4/2020 Senfleber et al.
 2020/0120167 A1 4/2020 Senfleber et al.
 2020/0151829 A1 5/2020 Wu
 2020/0184575 A1 6/2020 Gaedcke et al.
 2020/0258091 A1 8/2020 Gaedcke et al.
 2020/0287957 A1 9/2020 Falcao et al.
 2020/0329110 A1 10/2020 Holzband et al.
 2020/0358755 A1 11/2020 Abdul et al.
 2020/0366564 A1 11/2020 Davis et al.

FOREIGN PATENT DOCUMENTS

WO 2009047674 A2 4/2009
 WO 2013158839 A1 10/2013

WO 2014089460 A2 6/2014
 WO 2014153463 A3 1/2015
 WO 2015013436 A2 1/2015
 WO 2019075284 A2 4/2019
 WO 2019144159 A1 7/2019
 WO 2020232311 11/2020

OTHER PUBLICATIONS

Dinh, Khanh Q., Non-Final Office Action dated Mar. 17, 2021 for U.S. Appl. No. 16/820,697.
 Fett et al., The Web SSO Standard OpenID Connect: In-Depth Formal Security Analysis and Security Guidelines, 2017 IEEE 30th Computer Security Foundations Symposium (Year: 2017).
 Frunzi, Victoria E., Non-Final Office Action dated Dec. 21, 2020 for U.S. Appl. No. 16/590,218.
 Hardt, Dick, The OAuth 2.0 Authorization Framework draft-ietf-oauth-v2-31; Internet Engineering Task Force (IETF) (Year: 2012).
 Liu et al., OAuth Based Authentication and Authorization in Open Telco API; International Conference on Computer Science and Electronics Engineering, 2012 (Year: 2012).
 M. Rowe and H. Alani, "What Makes Communities Tick? Community Health Analysis Using Role Compositions," 2012 International Conference on Privacy, Security, Risk and Trust and 2012 International Conference on Social Computing, Amsterdam, Netherlands, 2012, pp. 267-276, doi:10.1109/SocialCom-PASSAT2012.18.
 Mesa, Joel, Notice of Allowance and Fee(s) Due dated Feb. 24, 2021 for U.S. Appl. No. 15/782,635.
 Neuman, Clifford B., Proxy-Based Authorization and Accounting for Distributed Systems, IEEE 1993 (Year: 1993).
 Niruntasokrat et al., Authorization Mechanism for MQTT-based Internet of Things, IEEE ICC 2016 Workshops: W07—Workshop on Convergent Internet of Things (Year: 2016).
 Shaw, Robert A., Final Office Action dated Mar. 16, 2021 for U.S. Appl. No. 16/158,169.
 Shaw, Robert A., Non-Final Office Action dated Jan. 22, 2021 for U.S. Appl. No. 16/158,169.
 Singh, Amardeep, IP Australia, Examination Report No. 1 for Australia Patent Application No. 2019209542 dated Dec. 17, 2020.
 Suh, Andrew, Final Office Action dated Dec. 3, 2020 for U.S. Appl. No. 16/158,172.
 "Craigslis Online Community." Craigslis.org. Jul. 6, 2010.
 Ahmed, Saba, Final Office Action dated Jun. 29, 2016 for U.S. Appl. No. 14/098,492.
 Ahmed, Saba, Non-Final Office Action dated Nov. 19, 2015 for U.S. Appl. No. 14/098,492.
 Arentz et al., Classifying offensive sites based on image content [online], Computer Vision and Image Understanding 94, 295-310, 2004, Retrieved from the Internet.
 Bista, Sanat Kumar et al., "Using Gamification in an Online Community," CSIRO ITC Centre, Conference Paper, 2012.
 Blaufeld, Justin R., Final Office Action dated Mar. 24, 2016 for U.S. Appl. No. 14/098,501.
 Blaufeld, Justin R., Non-Final Office Action dated Sep. 24, 2015 for U.S. Appl. No. 14/098,501.
 Bostock, Mike, Sankey Diagram, available at <http://bost.ocks.org/mike/sankey>, published May 21, 2012, 1 pg.
 Brown Jr., Nathan H., Final Office Action dated Mar. 29, 2011 for U.S. Appl. No. 11/971,856.
 Brown Jr., Nathan H., Non-Final Office Action dated Jun. 6, 2012 for U.S. Appl. No. 13/167,482.
 Brown Jr., Nathan H., Non-Final Office Action dated Mar. 24, 2014 for U.S. Appl. No. 13/780,487.
 Brown Jr., Nathan H., Non-Final Office Action dated Nov. 26, 2010 for U.S. Appl. No. 11/971,856.
 Bui, Hanh Thi Minh, Non-Final Office Action dated Mar. 13, 2015 for U.S. Appl. No. 14/012,978.
 Cannell, Larry, "Windows 7 Federated Search and SharePoint 2010" online article dated Jun. 2010 <<http://blogs.gartner.com/larry-cannell/2010/09/09/windows-7-federated-search-and-sharepoint-2010/> [May 13, 2016 12:36:15 PM].

(56)

References Cited

OTHER PUBLICATIONS

- Chung, Mong-Shune, Non-Final Office Action dated Jan. 29, 2016 for U.S. Appl. No. 14/098,505.
- Constine, Josh, "Facebook tests notification unsubscribe button for feed posts," Aug. 9, 2010. <http://www.adweek.com/socialtime/unsubscribe-button-posts/244868>.
- Dagneu, Saba, Final Office Action dated Feb. 12, 2020 for U.S. Appl. No. 15/581,795.
- Dagneu, Saba, Non-Final Office Action for U.S. Appl. No. 15/581,795 dated Sep. 16, 2019.
- Dinh, Khanh Q., Notice of Allowance and Fee(s) Due dated Oct. 29, 2019 for U.S. Appl. No. 15/877,379.
- Dwyer, Cameron, "Five out-of-the-box ways to get Email into SharePoint" Jan. 2012, <<https://camerondwyer.wordpress.com/2012/09/04/five-out-of-the-box-ways-to-get-email-into-sharepoint/>[May 13, 2016 10:48:43 AM].
- Emojipedia, (<https://web.archive.org/web/20150915110235/https://emojipedia.org/fisted-hand-sign/>), Date: Sep. 15, 2015; (<https://web.archive.org/web/20150823012626/https://emojipedia.org/clapping-hands-sign/>), Date: Aug. 23, 2015; (<https://web.archive.org/web/20150829090848/https://emojipedia.org/smiling-face-with-sunglasses/>), Date: Aug. 29, 2015.
- Falcao et al., U.S. Appl. No. 15/877,379, filed Jan. 22, 2018 and entitled, "Temporal Optimization of Data Operations Using Distributed Search and Server Management."
- Falcao et al., U.S. Appl. No. 15/877,381, filed Jan. 22, 2018 and entitled, "Temporal Optimization of Data Operations Using Distributed Search and Server Management."
- Filipczyk, Marcin R., Final Office Action dated Oct. 5, 2015 for U.S. Appl. No. 13/950,268.
- Filipczyk, Marcin R., Non-Final Office Action dated Mar. 10, 2016 for U.S. Appl. No. 13/950,268.
- Filipczyk, Marcin R., Non-Final Office action dated May 22, 2015 for U.S. Appl. No. 13/950,268.
- Fiorillo, James N., Non-Final Office Action for U.S. Appl. No. 15/821,543 dated Aug. 16, 2019.
- Fiorillo, James N., Notice of Allowance and Fee(s) Due dated Nov. 14, 2019 for U.S. Appl. No. 15/821,543.
- Friedman et al., U.S. Appl. No. 61/650,849, filed May 23, 2012 and entitled, "Dynamic Information Streams in a Social Network Platform."
- Frunzi, Victoria E., Non-Final Office Action dated Oct. 16, 2018 for U.S. Appl. No. 15/018,787.
- Gaedckle et al., U.S. Appl. No. 61/636,132, filed Apr. 20, 2012 and entitled, "System and Method for Providing a Social Customer Care System."
- Georgandellis, Andrew C., Final Office Action dated Mar. 30, 2016 for U.S. Appl. No. 13/900,878.
- Georgandellis, Andrew C., Final Office Action dated Oct. 26, 2017 for U.S. Appl. No. 13/900,878.
- Georgandellis, Andrew C., Final Office Action dated Sep. 21, 2016 for U.S. Appl. No. 14/035,166.
- Georgandellis, Andrew C., Non-Final Office Action dated Jan. 26, 2017 for U.S. Appl. No. 13/900,878.
- Georgandellis, Andrew C., Non-Final Office Action dated Jul. 11, 2016 for U.S. Appl. No. 14/035,166.
- Georgandellis, Andrew C., Non-Final Office Action dated May 23, 2017 for U.S. Appl. No. 14/035,166.
- Georgandellis, Andrew C., Non-Final Office Action dated Nov. 3, 2015 for U.S. Appl. No. 13/900,878.
- Giphy, (<https://web.archive.org/web/20140813065113/http://giphy.com/search/happy>), Date: Aug. 13, 2014; <https://web.archive.org/web/20141231135329/https://giphy.com/upload>, Date: Dec. 31, 2014; <https://web.archive.org/web/20150919214012/http://giphy.com/create/upload>, Date: Sep. 19, 2015.
- Goldberg, Ivan R., Final Office Action dated Jan. 12, 2015 for U.S. Appl. No. 13/835,502.
- Goldberg, Ivan R., Final Office Action dated Jan. 13, 2015 for U.S. Appl. No. 13/835,250.
- Goldberg, Ivan R., Final Office Action dated Jan. 15, 2015 for U.S. Appl. No. 13/865,429.
- Goldberg, Ivan R., Non-Final Office Action dated Apr. 13, 2016 for U.S. Appl. No. 13/865,429.
- Goldberg, Ivan R., Non-Final Office Action dated Jun. 18, 2014 for U.S. Appl. No. 13/835,250.
- Goldberg, Ivan R., Non-Final Office Action dated Jun. 18, 2014 for U.S. Appl. No. 13/835,502.
- Goldberg, Ivan R., Non-Final Office Action dated Jun. 20, 2014 for U.S. Appl. No. 13/865,411.
- Goldberg, Ivan R., Non-Final Office Action dated Jun. 23, 2014 for U.S. Appl. No. 13/865,429.
- Jang, Gijeong, Written Opinion of the International Searching Authority and International Search Report dated Jul. 28, 2015 for International Patent Application No. PCT/US2014/047866.
- Jou et al., "Predicting Viewer Perceived Emotions in Animated GIFs", Nov. 3-7, 2014 (4 pages).
- Kim, Harry C., Notification of Transmittal of the International Search Report and the Written Opinion of the International Searching Authority, or the Declaration dated Sep. 16, 2020 for International Patent Application No. PCT/US2020/032999.
- Kolosowski-Gager, Katherine, Final Office Action dated Feb. 11, 2019 for U.S. Appl. No. 14/627,151.
- Kolosowski-Gager, Katherine, Non-Final Office Action dated Jun. 29, 2018 for U.S. Appl. No. 14/627,151.
- Lithium Technologies. "Community Health Index for Online Communities." 2009, https://www.lithium.com/pdfs/whitepapers/Lithium-Community-Health-Index_v1AY2ULb.pdf. Retrieved from the Internet Wayback Machine, dated Feb. 19, 2011.
- Lithium Website, <http://www.lithium.com>, Dec. 11, 2010, retrieved from Internet Archive, pp. 1-9.
- M2 PressWire, "Alterian: Social media monitoring and analytics comes of age with Alterian's acquisition of market leader Technigy," Jul. 15, 2009, Anonymous, Norman Media Ltd, London.
- Matthews, Tara, et al. "Community Insights: Helping Community Leaders Enhance the Value of Enterprise Online Communities." Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, Apr. 27-May 2, 2013, Paris, France. ACM (2013). pp. 513-522.
- Meng, Jau Shya, Non-Final Office Action dated Jan. 3, 2020 for U.S. Appl. No. 15/877,381.
- Meng, Jau Shya, Non-Final Office Action dated Jun. 16, 2020 for U.S. Appl. No. 15/877,381.
- Mesa, Joel, Final Office Action dated Mar. 30, 2020 for U.S. Appl. No. 15/782,635.
- Mesa, Joel, Non-Final Office Action for U.S. Appl. No. 15/782,635 dated Oct. 4, 2019.
- Mesa, Joel, Non-Final Office Action dated Oct. 6, 2020 for U.S. Appl. No. 15/782,635.
- Mosley, Kyle T., Non-Final Office Action dated Dec. 28, 2017 for U.S. Appl. No. 14/852,965.
- Mosley, Kyle T., Non-Final Office Action dated Oct. 4, 2017 for U.S. Appl. No. 14/627,151.
- Netzloff, Eric R., Non-Final Office Action dated Nov. 25, 2014 for U.S. Appl. No. 13/848,706.
- Netzloff, Eric R., Non-Final Office Action dated Nov. 6, 2018 for U.S. Appl. No. 14/824,021.
- Ofori-Awuah, Maame, Final Office Action dated Oct. 2, 2020 for U.S. Appl. No. 14/929,209.
- Ofori-Awuah, Maame, Final Office Action dated Sep. 6, 2019 for U.S. Appl. No. 14/929,209.
- Ofori-Awuah, Maame, Non-Final Office Action dated Apr. 5, 2019 for U.S. Appl. No. 14/929,209.
- Oh, Eung Gie, Written Opinion of the International Searching Authority and International Search Report dated Nov. 18, 2014 for International Patent Application No. PCT/US2014/031345.
- Olshannikov, Alex, Final Office Action dated Apr. 15, 2016 for U.S. Appl. No. 14/098,480.
- Olshannikov, Alex, Final Office Action dated Feb. 17, 2016 for U.S. Appl. No. 14/098,509.
- Olshannikov, Alex, Non-Final Office Action dated Nov. 5, 2015 for U.S. Appl. No. 14/098,480.

(56)

References Cited

OTHER PUBLICATIONS

Olshannikov, Alex, Non-Final Office Action dated Oct. 22, 2015 for U.S. Appl. No. 14/098,509.

Perungavoor, Venkatanaray, Notice of Allowance and Fee(s) Due for U.S. Appl. No. 16/158,167, dated May 15, 2020.

Raju, "5 Ways to Tweet More Than 140 Characters," Dec. 28, 2008, Technically Personal, <http://www.techpp.com/2008/12/28/5-ways-to-tweet-more-than-140-characters/>, retrieved from Internet Archive version from Mar. 3, 2011.

Rao et al., U.S. Appl. No. 62/049,642, filed Sep. 12, 2014 and entitled, "System and Apparatus for an Application Agnostic User Search Engine."

Rashid, Ishrat, Final Office Action for U.S. Appl. No. 15/782,653 dated Sep. 19, 2019.

Rashid, Ishrat, Non-Final Office Action dated Jun. 11, 2019 for U.S. Appl. No. 15/782,653.

Rashid, Ishrat, Non-Final Office Action dated Jun. 12, 2020 for U.S. Appl. No. 15/782,653.

Senfleber et al., International (PCT) Patent Application No. PCT/US2018/055545, filed Oct. 12, 2018 and entitled, "Predicting Performance of Content and Electronic Messages Among a System of Networked Computing Devices."

Senfleber et al., U.S. Appl. No. 15/782,635, filed Oct. 12, 2017 and entitled, "Computerized Tools to Enhance Speed and Propagation of Content in Electronic Messages Among a System of Networked Computing Devices."

Senfleber et al., U.S. Appl. No. 15/782,642, filed Oct. 12, 2017 and entitled, "Predicting Performance of Content and Electronic Messages Among a System of Networked Computing Devices."

Senfleber et al., U.S. Appl. No. 15/782,653, filed Oct. 12, 2017 and entitled, "Optimizing Effectiveness of Content in Electronic Messages Among a System of Networked Computing Device."

Senfleber et al., U.S. Appl. No. 16/158,167, filed Oct. 11, 2018 and entitled, "Credential and Authentication Management in Scalable Data Networks."

Senfleber et al., U.S. Appl. No. 16/158,169, filed Oct. 11, 2018 and entitled, "Native Activity Tracking Using Credential and Authentication Management in Scalable Data Networks."

Senfleber et al., U.S. Appl. No. 16/158,172, filed Oct. 11, 2018 and entitled, "Proxied Multi-Factor Authentication Using Credential and Authentication Management in Scalable Data Networks."

Senfleber et al., U.S. Appl. No. 16/194,126, filed Nov. 16, 2018 and entitled, "Multiplexed Data Exchange Portal Interface in Scalable Data Networks."

Spasojevic et al., U.S. Appl. No. 61/943,047, filed Feb. 21, 2014 and entitled, "Domain Generic Large Scale Topic Expertise & Interest Mining Across Multiple Online Social Networks."

Spasojevic, Nemanja et al., "When-To-Post on Social Networks", International Conference on Knowledge Discovery and Data Mining (KDD), Aug. 10-13, 2015, pp. 2127-2136, Retrieved Online: <http://dl.acm.org/citation.cfm?id=2788584>.

Suh, Andrew, Non-Final Office Action dated Jul. 8, 2020 for U.S. Appl. No. 16/158,172.

Tabor, Amare F., Final Office Action dated Apr. 8, 2015 for U.S. Appl. No. 13/871,076.

Walsh, John B., Non-Final Office Action dated Mar. 24, 2017 for U.S. Appl. No. 14/702,696.

Wang, Xiaoqing, and Shannon Lantzy. "A Systematic Examination of Member Turnover and Online Community Health." Thirty Second International Conference on Information Systems, Shanghai (2011), pp. 1-11.

Wollenstein et al., U.S. Appl. No. 61/639,509, filed Apr. 27, 2012 and entitled, "Systems and Methods for Implementing Custom Privacy Settings."

Wu, Michael, U.S. Appl. No. 61/734,927, filed Dec. 7, 2012 and entitled, "Systems and Methods for Presenting Analytic Data."

Wu, Michael, U.S. Appl. No. 62/072,929, filed Oct. 30, 2014 and entitled, "Systems and Methods to Monitor Health of Online Social Communities."

Young, Lee W., Notification of Transmittal of the International Search Report and the Written Opinion of the International Searching Authority, or the Declaration, dated Apr. 1, 2019 for International Application No. PCT/US2018/05545.

Young, Lee W., Written Opinion of the International Searching Authority and International Search Report dated May 28, 2014 for International Patent Application No. PCT/US2013/073625.

Young, Lee W.; Notification of Transmittal of the International Search Report and the Written Opinion of the International Searching Authority, or the Declaration dated Jun. 24, 2019 for International Application No. PCT/US2019/014637.

Hashemi, Mazdak, "The Infrastructure Behind Twitter: Scale", Jan. 19, 2017, Twitter, Inc. Blog Post, https://blog.twitter.com/engineering/en_us/topics/infrastructure/2017/the-infrastructure-behind-twitter-scale.html.

Hatcher, Deirdre D., Non-Final Office Action dated Jan. 14, 2016 for U.S. Appl. No. 13/950,258.

Holzband et al., U.S. Appl. No. 15/821,543, filed Nov. 22, 2017 and entitled, "Responsive Action Prediction Based on Electronic Messages Among a System of Networked Computing Devices."

Tabor, Amare F., Non-Final Office Action dated Aug. 15, 2014 for U.S. Appl. No. 13/871,076.

Takesue, Masaru, An HTTP Extension for Secure Transfer of Confidential Data, 2009 IEEE International Conference on Networking, Architecture, and Storage, Hunan, 2009, pp. 101-108, doi: 10.1109/NAS.2009.21.

Thomas, Shane, Written Opinion of the International Searching Authority and International Search Report dated Aug. 16, 2013 for International Patent Application No. PCT/US2013/037107.

Trapanese, William C., Non-Final Office Action dated May 27, 2020 for U.S. Appl. No. 16/413,577.

Vo, Huyen X., Non-Final Office Action dated Mar. 15, 2019 for U.S. Appl. No. 15/782,642.

Vo, Huyen X., Non-Final Office Action dated Oct. 15, 2020 for U.S. Appl. No. 16/458,183.

* cited by examiner

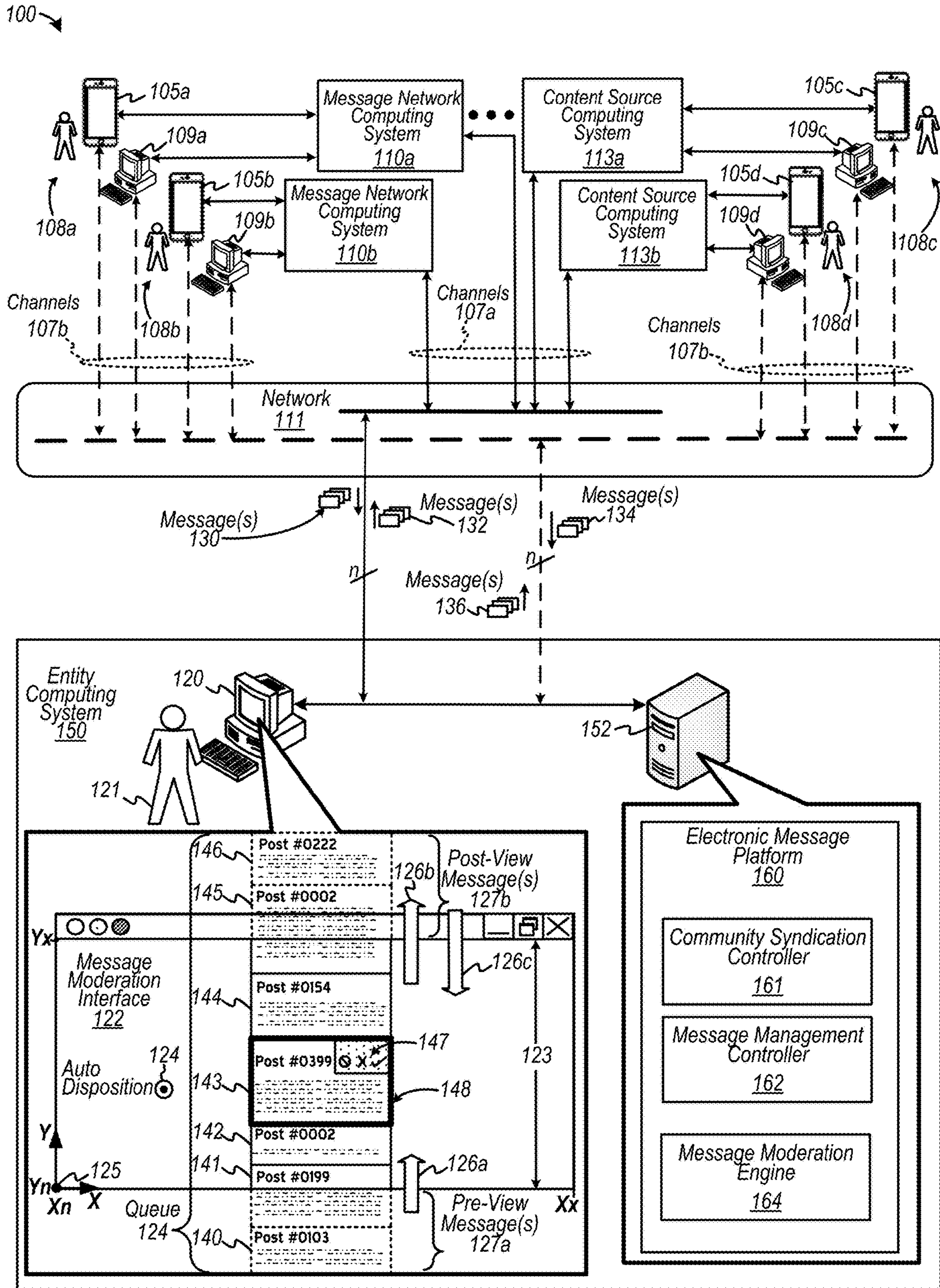


FIG. 1

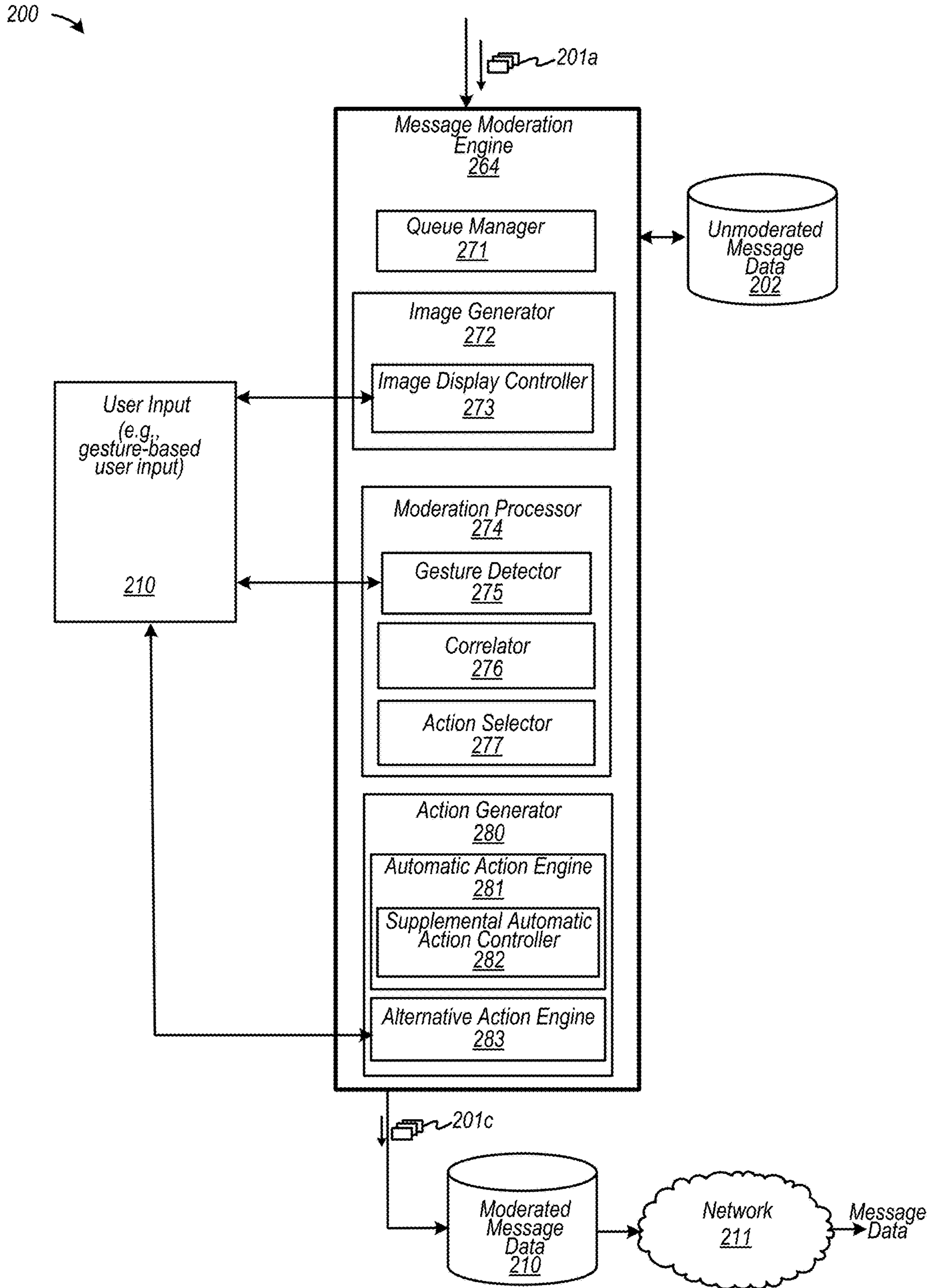


FIG. 2

300 →

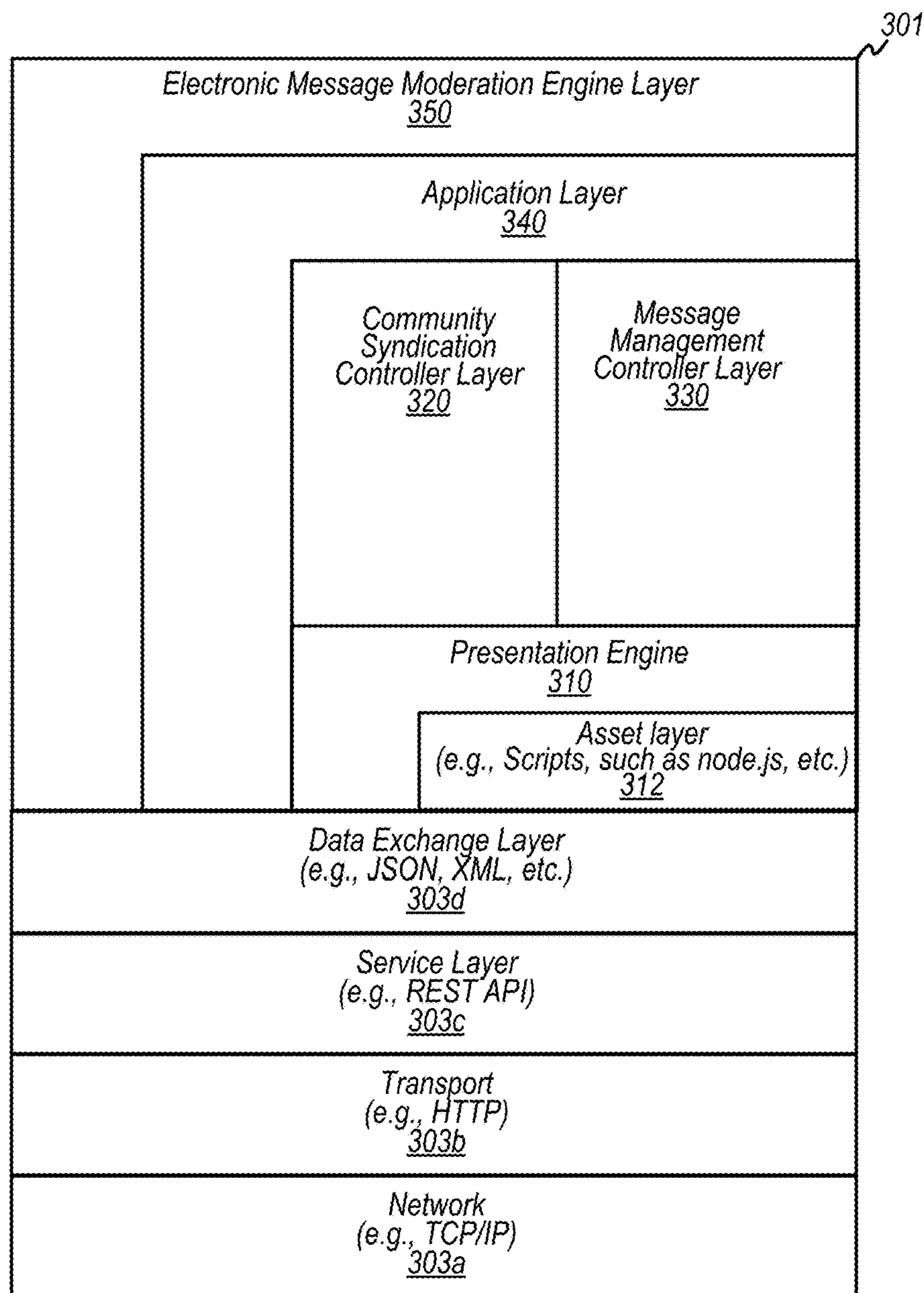


FIG. 3

400 ↘

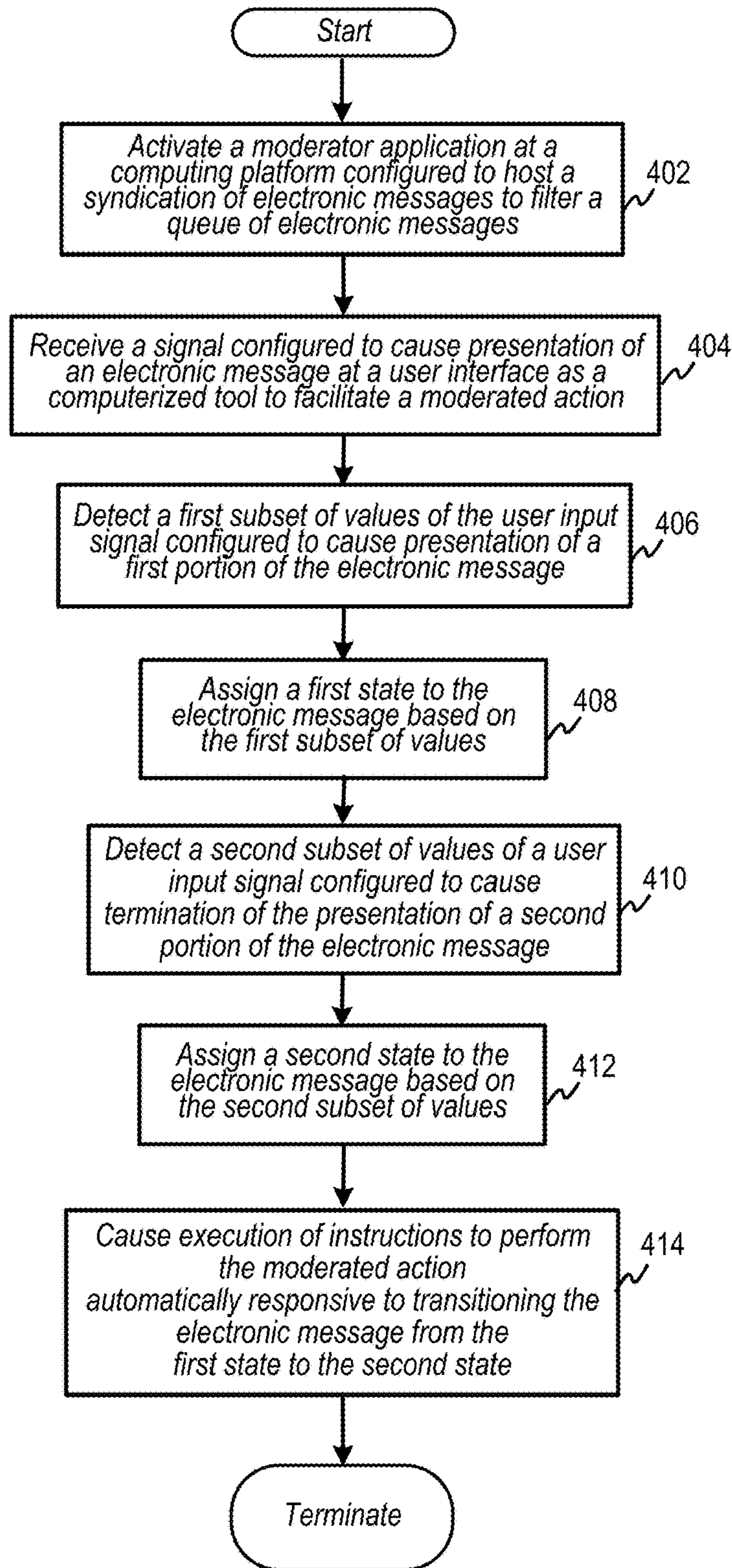


FIG. 4

500 →

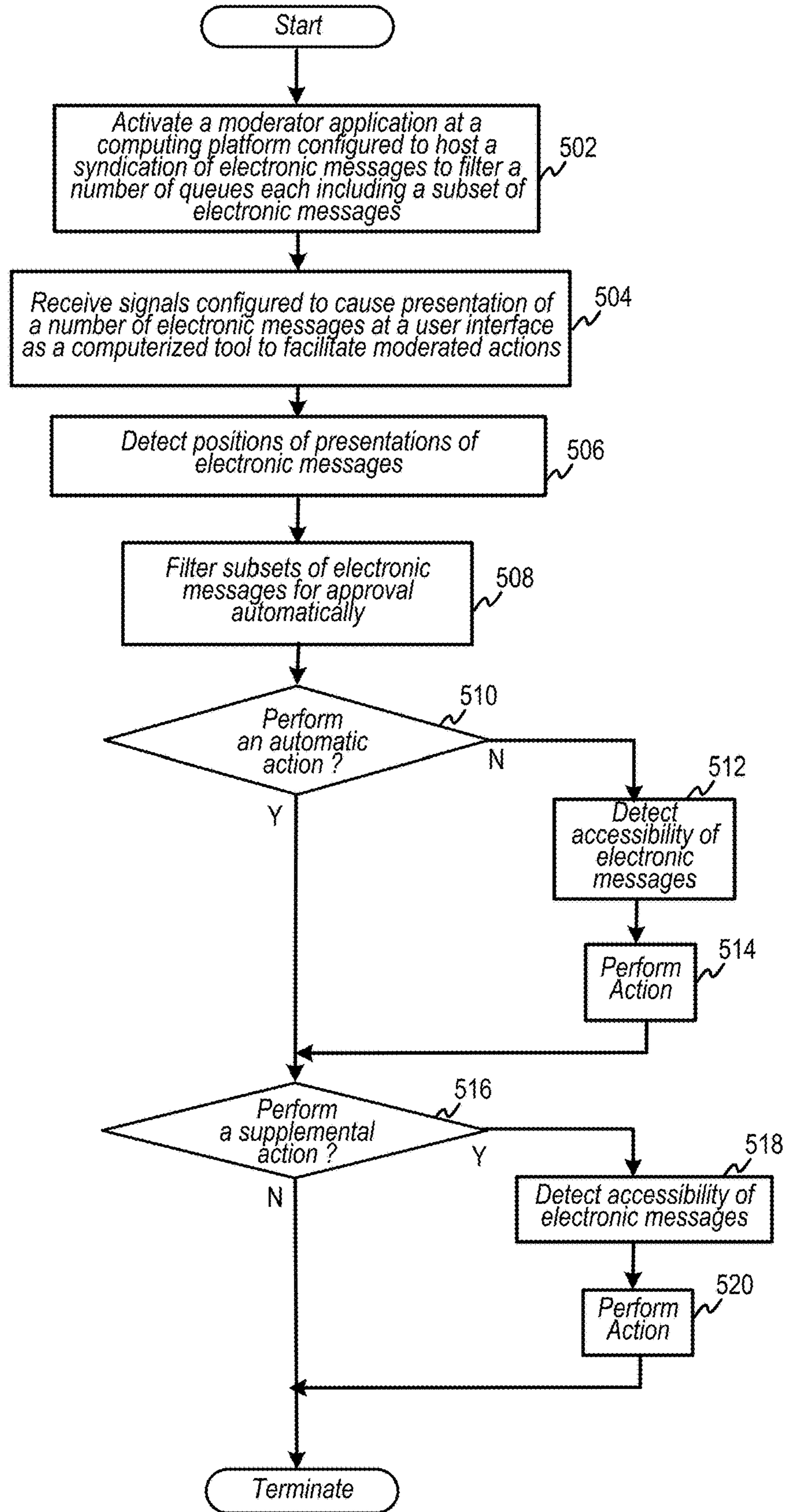


FIG. 5

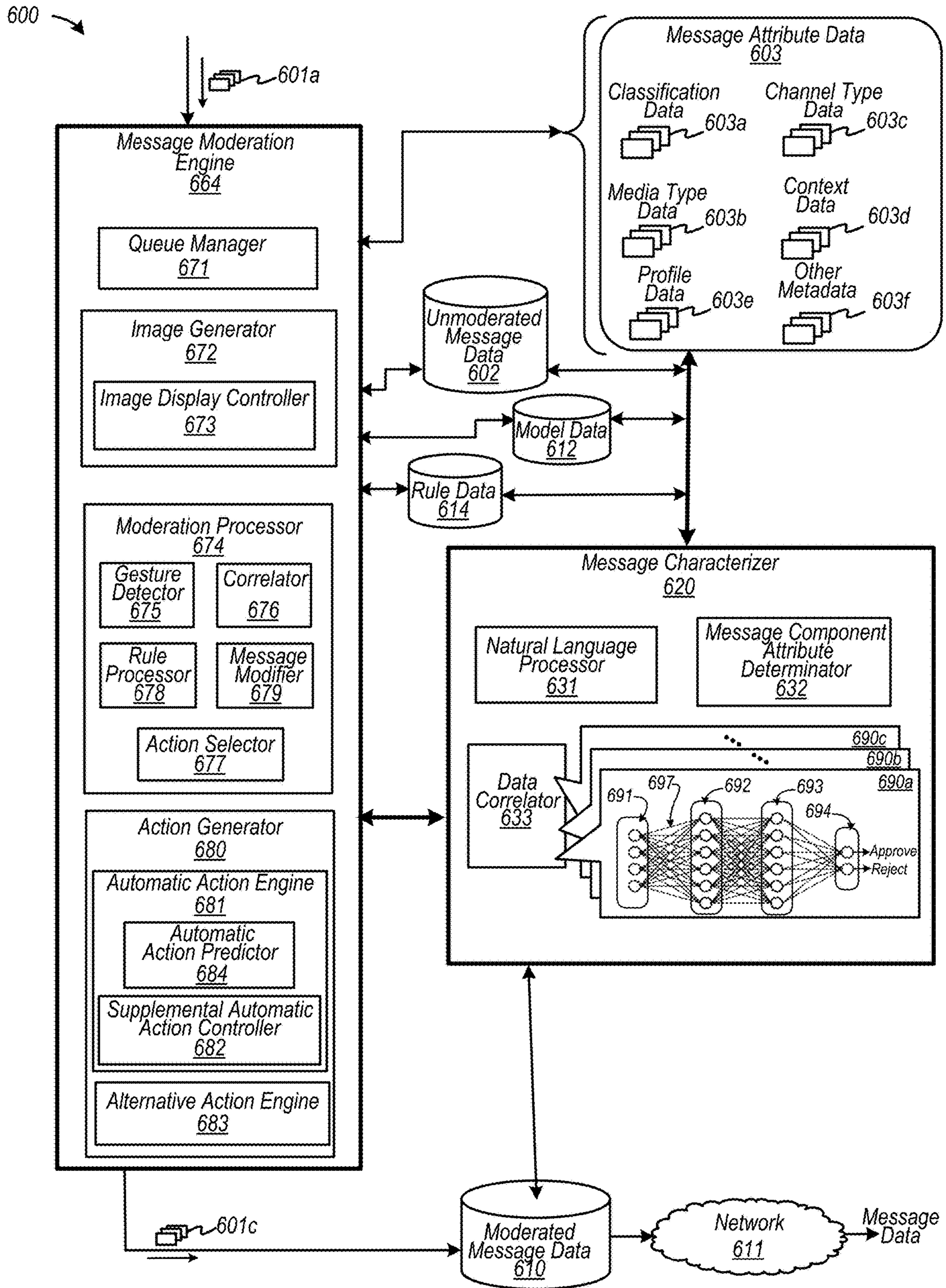


FIG. 6

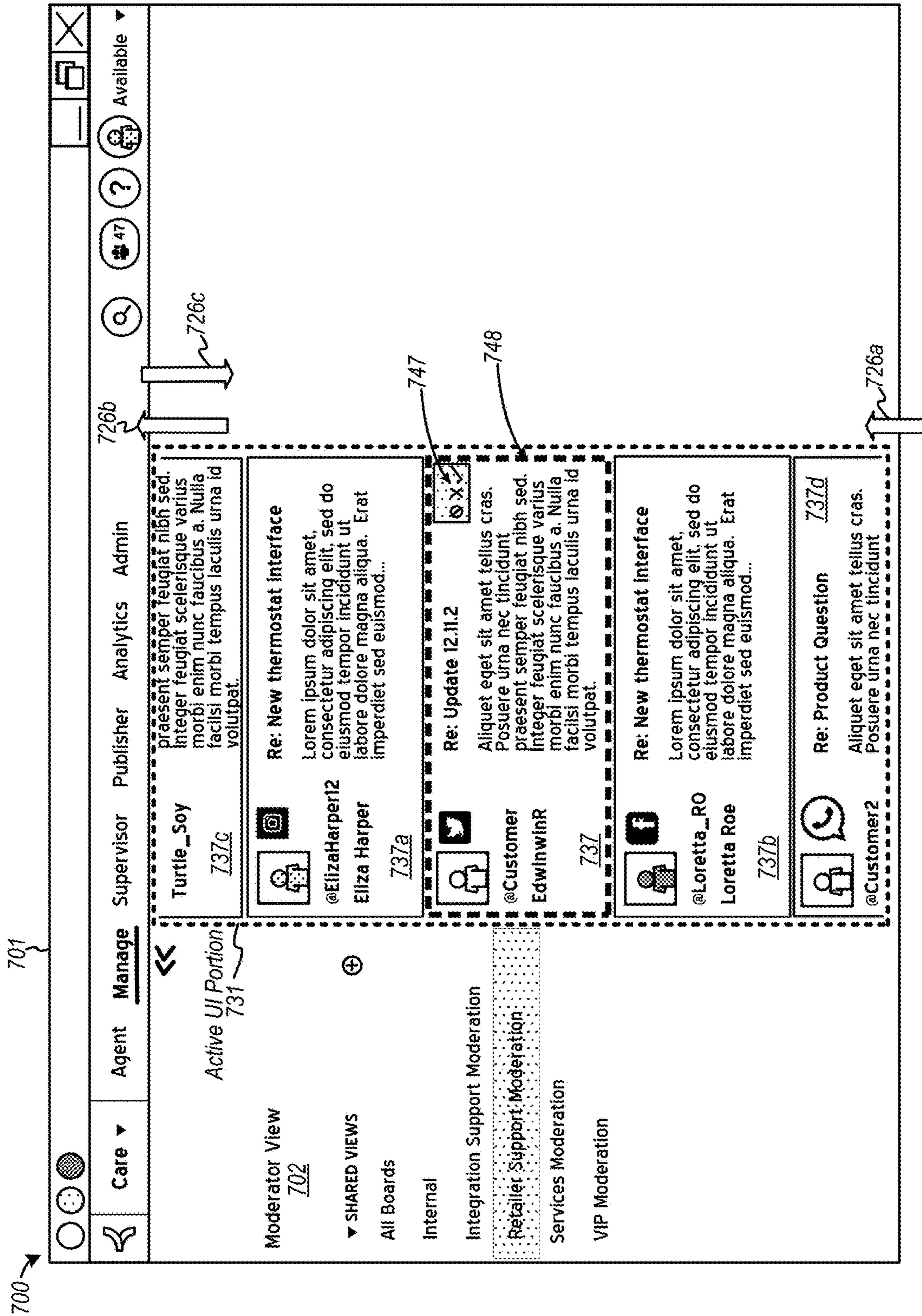


FIG. 7

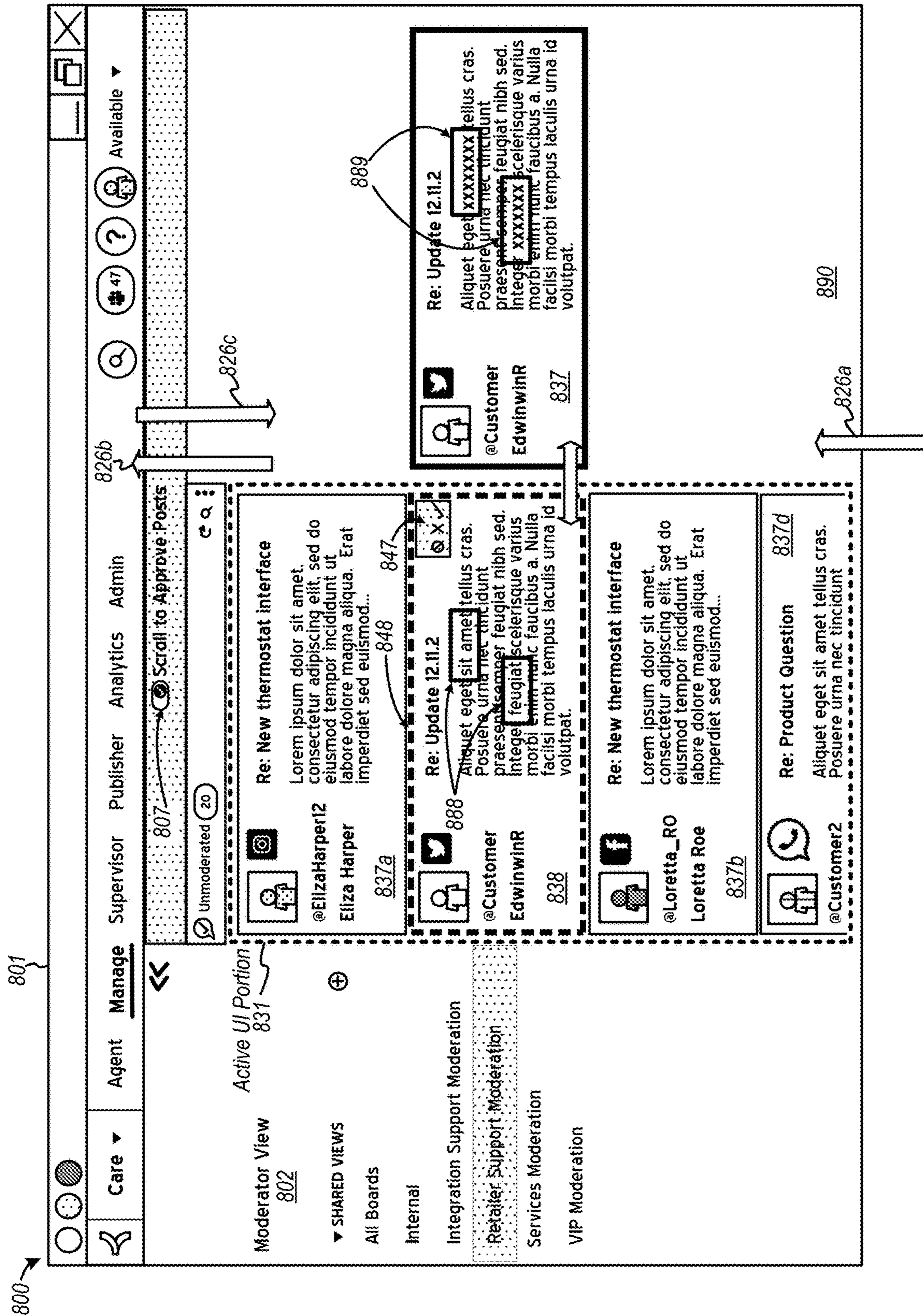


FIG. 8

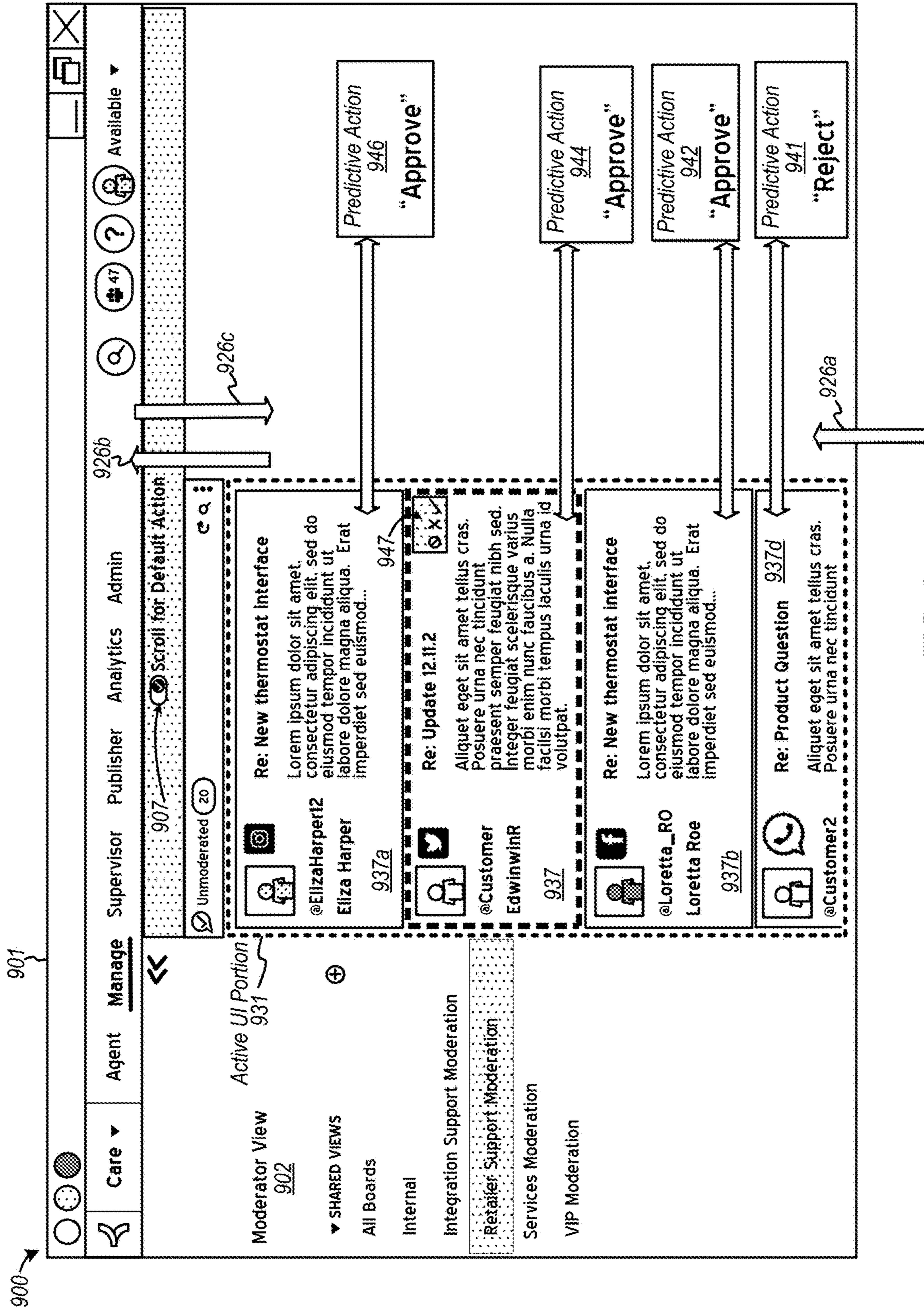


FIG. 9

1000 →

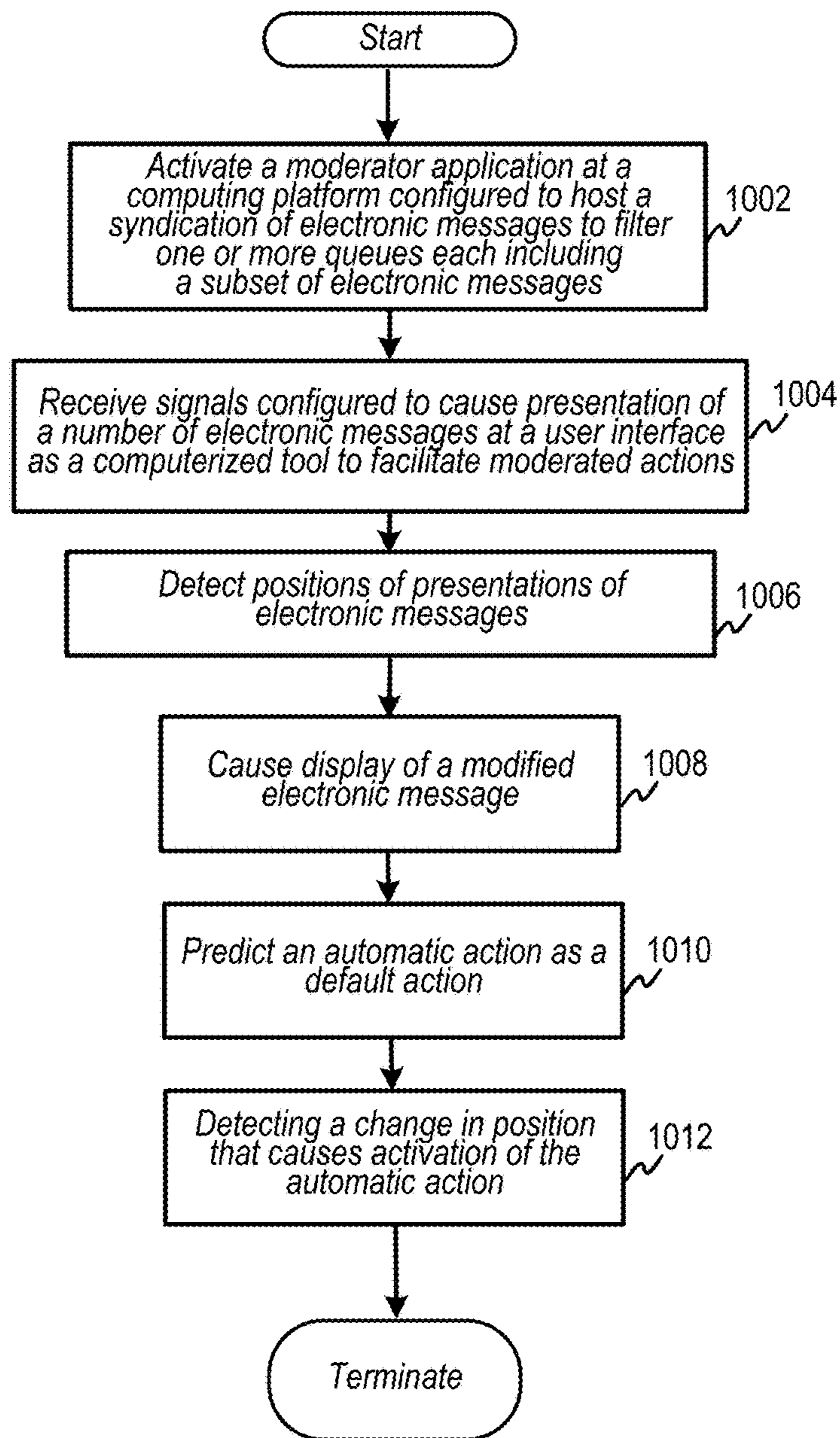


FIG. 10

1100 →

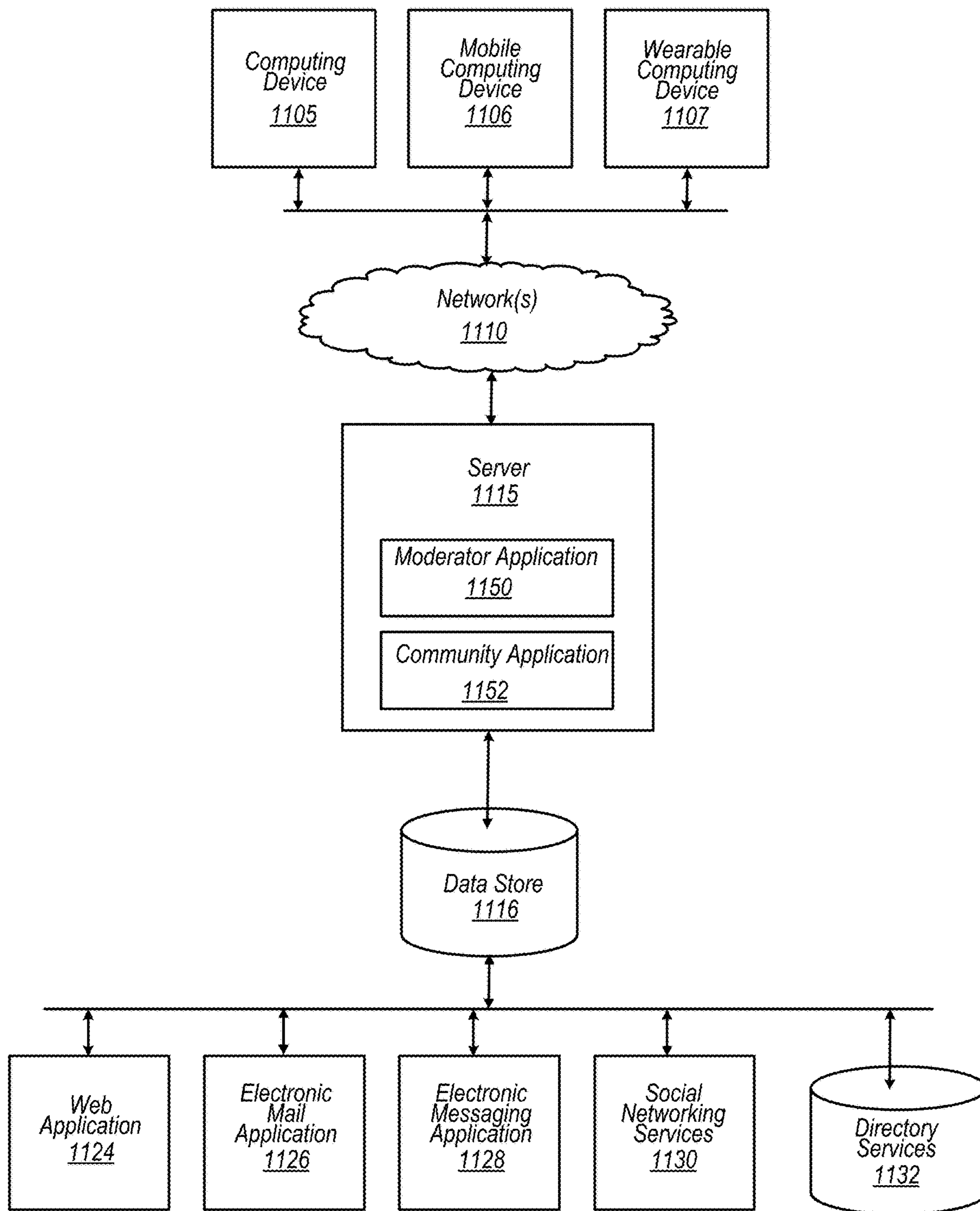


FIG. 11

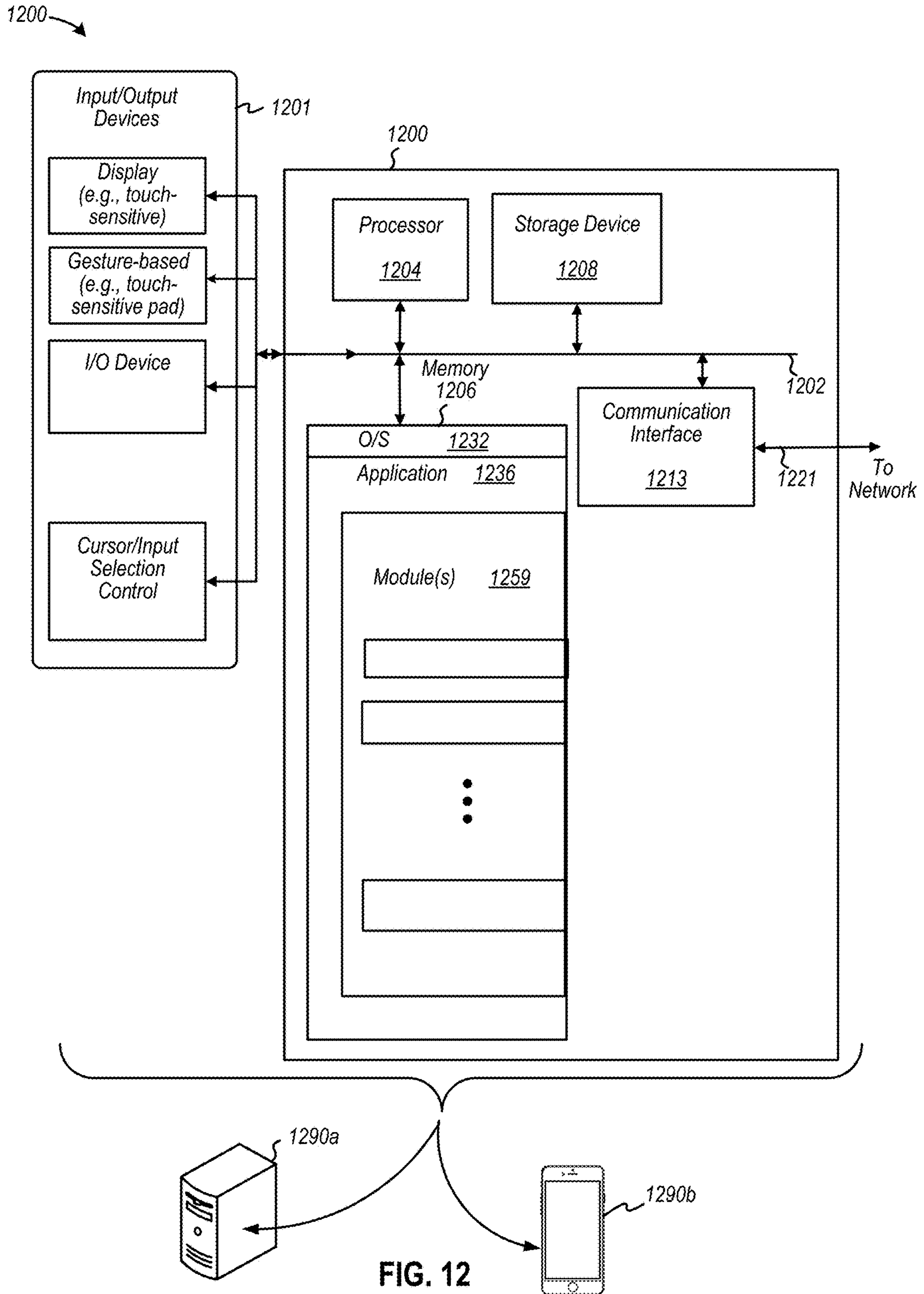


FIG. 12

1

**GESTURE-BASED COMMUNITY
MODERATION**

FIELD

Various embodiments relate generally to data science and data analysis, computer software and systems, and control systems to provide a platform to facilitate implementation of an interface as a computerized tool, among other things, and, more specifically, to a computing and data platform that implements logic to facilitate moderation of electronic messages, postings, content, etc., via implementation of a moderator application configured to, for example, perform one or more actions automatically.

BACKGROUND

Advances in computing hardware and software have fueled exponential growth in delivery of vast amounts of information due to increased improvements in computational and networking technologies. Also, advances in conventional data network technologies provide an ability to exchange increasing amounts of generated data via various electronic messaging platforms. Thus, improvements in computing hardware, software, network services, and storage have bolstered growth of Internet-based messaging applications, such as social networking platforms and applications, especially in an area of exchanging digital information concerning products and services to facilitate customer care operations, as well as online communities. For example, various organizations and corporations (e.g., retailer sellers) may exchange information through any number of electronic messaging networks, including social media networks. Such entities aim to respond quickly and efficiently to messages from customers (and potential customers) to manage brand loyalty and reputation, and to bolster customer engagement.

And since different customers prefer communicating over different communication channels (e.g., social media networked channels and communities of electronic messages) and various different data networks, traditional customer-relationship management (“CRM”) computing systems and processes are not well-suited to adapt to engage and moderate communities of customers and associated computing devices at convenience of the customers “on-the-go.”

Social media networks and communities can be found in widespread use as there are many different types and categories often reaching as many as a billion or more users, electronic messages, or units of content, which include various types of content, such as pictures, text, video, audio, multimedia, or any combination thereof. Social media networks and communities are increasingly prolific and can range in scope, size, interest, and reach. Social media networks and communities, in some cases, can be integrated with websites, platforms, or other online properties for specific interests or purposes, which may be social, commercial, governmental, educational, academic, professional, technical, etc.

Various social media networks, websites, and communities can require communities of content to meet certain standards, terms, or conditions that are social, cultural, or legal in nature, which require compliance and, consequently, can often reduce or limit what content may be posted online. Generally, profane or hateful content, threatening content, perjurious commercial speech, and the like, may violate policies and terms of use of a community, which, if unmoderated, can result in social detriment, legal liability, breach

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of cultural values and mores (e.g., alongside laws, rules, and regulations), or other deleterious effects. In other cases, fraudulent product reviews may damage the online goodwill and perceived value of a company and its products.

To enforce compliance and avoid inappropriate content from being posted into a community of content and electronic messages, traditional social media networks and communities implement conventional social media networks, platforms, platform technologies, and software to monitor, moderate, and manage content and electronic message prior to posting. Conventionally, employees or other personnel (e.g., of various social media networks, platforms, platform providers, and software developers that provide products or services) may be required, as moderators, to read, review, or otherwise scrutinize content intended to be posted to one or more social media networks, or to online communities and groups.

Moderators may be required to review and act on hundreds, thousands, or perhaps hundreds of thousands of items, uploads, or other postings (e.g., electronic posts, messages, units of content, etc.) to ensure compliance with terms (e.g., terms of use), conditions, policies, laws, regulations, rules, and the like. However, conventional moderation techniques and software, including those integrated with existing social media management platforms are generally inefficient, expensive, time-consuming, and usually cumbersome to maintain given the increasing amounts of posting submissions.

Various drawbacks to traditional techniques to moderation using known computing devices and software can often lead to fatigue, resulting in lapses in focus, inadvertent posts, errors, and the like, which may create significant cost and effort to correct. Erroneously moderated content, which may result in propagation of unmoderated content, can also detrimentally affect cohesiveness, trustworthiness, reliability, and reputations of online communities. Further, suboptimal moderation techniques using computing devices and moderator software may increase risk of civil and criminal penalties for unmoderated speech or content that is regulated by law (e.g., violations of Americans with Disabilities Act, or “ADA”). In addition, incorrect or suboptimal content posted into a community may cause customer frustration and dissatisfaction, which can typically be projected negatively unto a corporation and its brand.

Thus, what is needed is a solution for facilitating techniques that optimize computer utilization and performance associated with moderating content and/or electronic messages, without the limitations of conventional techniques.

BRIEF DESCRIPTION OF THE DRAWINGS

Various embodiments or examples (“examples”) of the invention are disclosed in the following detailed description and the accompanying drawings:

FIG. 1 is a diagram depicting an electronic message platform to facilitate moderation of subsets of electronic content, according to some embodiments;

FIG. 2 depicts an example of a message moderation engine, according to various examples;

FIG. 3 illustrates an exemplary layered architecture for implementing a moderator application, according to some examples;

FIG. 4 is a flow diagram as an example of moderating an electronic message, according to some embodiments;

FIG. 5 is a flow diagram as another example of moderating a number of electronic message, according to some embodiments;

FIG. 6 depicts another example of a message moderation engine, according to various examples;

FIG. 7 depicts an example of a user interface configured to moderate electronic messages and posts, according to some examples;

FIG. 8 depicts another example of a user interface configured to moderate electronic messages and posts using proposed modified electronic messages, according to various examples;

FIG. 9 depicts yet another example of a user interface configured to moderate electronic messages and posts using predictive default actions, according to various examples;

FIG. 10 is a flow diagram as another example of moderating a number of electronic message using either proposed modified message content or predicted automatic default actions, or both, according to some embodiments;

FIG. 11 depicts an example of a system architecture to provide a computing platform to host a syndication of electronic messages and posts for moderation, according to an example; and

FIG. 12 is a diagram depicting an example of an electronic message response platform configured to moderate content and/or electronic messages, according to some examples.

DETAILED DESCRIPTION

Various embodiments or examples may be implemented in numerous ways, including as a system, a process, an apparatus, a user interface, or a series of program instructions on a computer readable medium such as a computer readable storage medium or a computer network where the program instructions are sent over optical, electronic, or wireless communication links. In general, operations of disclosed processes may be performed in an arbitrary order, unless otherwise provided in the claims.

A detailed description of one or more examples is provided below along with accompanying figures. The detailed description is provided in connection with such examples, but is not limited to any particular example. The scope is limited only by the claims, and numerous alternatives, modifications, and equivalents thereof. Numerous specific details are set forth in the following description in order to provide a thorough understanding. These details are provided for the purpose of example and the described techniques may be practiced according to the claims without some or all of these specific details. For clarity, technical material that is known in the technical fields related to the examples has not been described in detail to avoid unnecessarily obscuring the description or providing unnecessary details that may be already known to those of ordinary skill in the art.

As used herein, “system” may refer to or include the description of a computer, network, or distributed computing system, topology, or architecture using various computing resources that are configured to provide computing features, functions, processes, elements, components, or parts, without any particular limitation as to the type, make, manufacturer, developer, provider, configuration, programming or formatting language, service, class, resource, specification, protocol, or other computing or network attributes. As used herein, “software” or “application” may also be used interchangeably or synonymously with, or refer to, a computer program, software, program, firmware, or any other term that may be used to describe, reference, or refer to a logical set of instructions that, when executed, performs a function or set of functions within a computing system or

machine, regardless of whether physical, logical, or virtual and without restriction or limitation to any particular implementation, design, configuration, instance, or state. Further, “platform” may refer to any type of computer hardware (hereafter “hardware”) or software, or any combination thereof, that may use one or more local, remote, distributed, networked, or computing cloud (hereafter “cloud”)-based computing resources (e.g., computers, clients, servers, tablets, notebooks, smart phones, cell phones, mobile computing platforms or tablets, and the like) to provide an application, operating system, or other computing environment, such as those described herein, without restriction or limitation to any particular implementation, design, configuration, instance, or state. Distributed resources such as cloud computing networks (also referred to interchangeably as “computing clouds,” “storage clouds,” “cloud networks,” or, simply, “clouds,” without restriction or limitation to any particular implementation, design, configuration, instance, or state) may be used for processing and/or storage of varying quantities, types, structures, and formats of data, without restriction or limitation to any particular implementation, design, or configuration.

As used herein, data may be stored in various types of data structures including, but not limited to databases, data repositories, data warehouses, data stores, or other data structures configured to store data in various computer programming languages and formats in accordance with various types of structured and unstructured database schemas such as SQL, MySQL, NoSQL, DynamoDB™, etc. Also applicable are computer programming languages and formats similar or equivalent to those developed by data facility and computing providers such as Amazon® Web Services, Inc. of Seattle, Wash., FMP, Oracle®, Salesforce.com, Inc., or others, without limitation or restriction to any particular instance or implementation. DynamoDB™, Amazon Elasticsearch Service, Amazon Kinesis Data Streams (“KDS”)™, Amazon Kinesis Data Analytics, and the like, are examples of suitable technologies provide by Amazon Web Services (“AWS”).

Further, references to databases, data structures, or any type of data storage facility may include any embodiment as a local, remote, distributed, networked, cloud-based, or combined implementation thereof. For example, social networks and social media (e.g., “social media”) using different types of devices may generate (i.e., in the form of posts (which is to be distinguished from a POST request or call over HTTP) on social networks and social media) data in different forms, formats, layouts, data transfer protocols, and data storage schema for presentation on different types of devices that use, modify, or store data for purposes such as electronic messaging, audio or video rendering, content sharing, or like purposes. Data may be generated in various formats such as text, audio, video (including three dimensional, augmented reality (“AR”), and virtual reality (“VR”), or others, without limitation, for use on social networks, social media, and social applications (e.g., “social media”) such as Twitter® of San Francisco, Calif., Snapchat® as developed by Snap® of Venice, Calif., Messenger as developed by Facebook®, WhatsApp®, or Instagram® of Menlo Park, Calif., Pinterest® of San Francisco, Calif., LinkedIn® of Mountain View, Calif., as well as community-based networks, such as Khoros® Community as provided by Khoros, LLC of Austin, Tex., and others, without limitation or restriction.

In some examples, data may be formatted and transmitted (i.e., transferred over one or more data communication protocols) between computing resources using various types

of data communication and transfer protocols such as Hypertext Transfer Protocol (“HTTP”), Transmission Control Protocol (“TCP”)/Internet Protocol (“IP”), Internet Relay Chat (“IRC”), SMS, text messaging, instant messaging (“IM”), File Transfer Protocol (“FTP”), or others, without limitation. As described herein, disclosed processes implemented as software may be programmed using Java®, JavaScript®, Scala, Python™, XML, HTML, and other data formats and programs, without limitation. Disclosed processes herein may also implement software such as Streaming SQL applications, browser applications (e.g., Firefox™) and/or web applications, among others. In some example, a browser application may implement a JavaScript framework, such as Ember.js, Meteor.js, ExtJS, AngularJS, and the like. References to various layers of an application architecture (e.g., application layer or data layer) may refer to a stacked layer application architecture such as the Open Systems Interconnect (“OSI”) model or others.

In some examples, systems, software, platforms, and computing clouds, or any combination thereof, may be implemented to facilitate online “communities” of subsets of units of content, postings, electronic messages, and the like. In some cases, units of content, electronic postings, electronic messages, and the like may originate at social networks, social media, and social applications, or any other source of content.

FIG. 1 is a diagram depicting an electronic message platform to facilitate moderation of subsets of electronic content, according to some embodiments. Diagram 100 depicts an example of an entity computing system 150 including an electronic message platform 160 that may be configured to, among other things, facilitate moderation of electronic messages, postings, content, etc., via implementation of a moderator application and/or computing device configured to, for example, perform one or more actions automatically. In various examples, one or more inbound electronic messages may be disposed (e.g., as unmoderated electronic messages) in a queue so that electronic message platform 160 may facilitate moderation or filtering of the inbound electronic messages for posting into an online community, such as messages 130 and 134. In some examples, moderation of electronic messages may be based on a user input that may be configured to perform multiple actions regarding each electronic message in a queue. In some examples, a user input to perform multiple actions may be implemented using a common user input, which may include a common gesture. Hence, a gesture, as a user input into a gesture-based interface, may facilitate moderation of electronic messages, at least in some examples. According to various examples, an electronic message may refer to an electronic post, content (e.g., or portion thereof, such as a unit of content), and the like, any of which may originate in various different formats and may be adapted for integration into an online community of, for example, categorized or classified content as presented in one or more webpages or any other electronic media. An electronic message or post may also refer to, for example, data representing an article, a comment, a reply submitted to an online community, or the like.

Diagram 100 depicts an entity computing system 150 including a user interface 120 and a computing device 152 (e.g., one or more servers, including one or more processors and/or memory devices), both of which may be configured to moderate electronic messages and implement any number of actions to facilitate the moderation of such messages based on logic disposed in electronic message platform 160. As shown, computing device 152 may be configured, in at

least one example, to provide one or more software functionalities and/or hardware structures to implement a community syndication controller 161, a message management controller 162, and a message moderation engine 164.

Community syndication controller 161 may be configured to host an online community to facilitate an electronic exchange of information and data among a group of users with related interests, goals, questions, problems, suggestions, experiences, etc., regarding one or more products, one or more services, or any other one or more topics or subject matter-related issues, or the like. Further, community syndication controller 161 may be configured to interact electronically with message moderation engine 164, which may be configured to moderate or filter (e.g., for approval) exchanges or postings of electronic messages in a moderated online community regardless of data formats (e.g., as a blog, a website, an email, a text message, or the like). Message management controller 162 may include logic configured to manage electronic interactions and messages among an online community as well as any other sources of data (e.g., online chat sessions, electronic messages directed to an entity rather than a community, or the like). In at least one example, community syndication controller 161 may be implemented with at least some functionality provided by an application configured to operate in accordance with Lithium Community technologies (formally of Lithium Technologies, LLC), Khoros® Communities of Khoros, LLC of Austin Tex., and “Atlas” Communities of Khoros, LLC of Austin Tex., among other online community configurations. Further, message management controller 162 may be implemented using at least some functionality provided by an application configured to operate in accordance with “Modern Chat”-related technologies and “Khoros Care”-related technologies, both of Khoros, LLC of Austin Tex., among other technologies.

In some examples, a subset of an electronic community (e.g., online community) may include any number of electronic messages or posts that may relate to each other by subject matter or any other classification. As an example, an online community may be subdivided based on whether content relates to a “forum” (e.g., content directed to resolving a problem), an “idea” (e.g., content directed to proposed suggestions related to any item, such as a product), a “frequently-asked question” (e.g., content directed to searchable solutions that are determined to be effective), an “expert” classification (e.g., directed to users or electronic accounts associated with expert-based content), a “knowledge base” of searchable solutions to user inquiries, and any other classification or categorization.

Electronic messages may originate at any computing devices 109a to 109d, which are respectively associated with users 108a to 108d. In the example shown, user 108a may be associated with one or more computing devices, such as mobile computing device 105a or any type of computing device 109a, user 108b may be associated with one or more computing devices, such as mobile computing device 105b or any type of computing device 109b, user 108c may be associated with one or more computing devices, such as mobile computing device 105c or any type of computing device 109c, and user 108d may be associated with one or more computing devices, such as mobile computing device 105d or any type of computing device 109d. Note that any number of mobile and other types of computing devices may be configured to transmit and/or receive messages and are not limited to those shown. Any of mobile computing devices 105a to 105d and any of computing devices 109a to 109d may be configured to generate elec-

tronic messages to, for example, initiate moderation of those messages for inclusion in one or more data arrangements (e.g., in data storage) that constitute or implement an online community of messages.

Any one or more of message network computing systems **110a** and **110b** (including one or more applications) may be configured to receive and transmit electronic messages, regardless of a context, to convey an inquiry, experience, observation, request for assistance (e.g., in relation to a product or service), or any other information with or among any number of users for any reason. Such messages and content may be directed to resolving a problem via an inquiry, to providing experienced advice or suggestions (e.g., as an expert), to provide observations as an idea to, for example, improve a product or a service, to request for assistance, or to exchange any information among users **108a** to **108d**, whereby electronic message platform **160** and/or community syndication controller **161** may be configured to host and moderate, for example, peer-to-peer exchanges of messages using message moderation engine **164**. Similarly, or equivalently, one or more of message network computing systems **110a** and **110b** may be configured to communicate electronic message content in any form in any digital media or channel **107a**. Also, one or more computing systems **113a** and **113b** may be configured to communicate electronic message content in any form in any digital media or channel **107a**. Also, electronic message platform **160**, community syndication controller **161**, and/or message moderation engine **164** may be configured to moderate electronic message content originating at computing systems **113a** and **113b** as well as message network computing systems **110a** and **110b**.

Note that in some examples, channels **107a** may be publicly-accessible channels, whereas channels **107b** may constitute secure, private, and/or and proprietary communication channels. As such, mobile computing devices **105a** to **105d** and computing devices **109a** to **109d** may be configured to submit electronic messages for posting in an online community via a secure data channel **107b**.

In various examples, message network computing systems **110a** and **110b** may include any number of computing systems configured to propagate electronic messaging, including, but not limited to, computing systems including third party servers, such as third parties like Facebook™, Twitter™, LinkedIn™, Instagram™, Snapchat™ as well as other private or public social networks to provide social-media related informational data exchange services. Hence, message network computing systems **110a** and **110b** may include any social network computing system. Computing systems **113a** and **113b** (including one or more applications, such as text messaging applications) may be configured to provide any type of digital content, such as email, text messaging (e.g., via SMS messaging, Multimedia Messaging Service (“MMS”), WhatsApp™, WeChat™ Apple® Business Chat™, Instagram™ Direct Messenger, etc.), web pages (e.g., Facebook® websites and posts, Instagram® websites and posts, Twitter® websites and posts, etc.), audio (e.g., Spotify®-based content, etc.), video (e.g., YouTube™-based content, etc.), and any other content.

According to some examples, message network computing systems **110a** and **110b** may include applications or executable instructions configured to facilitate interactions (e.g., social interactions) amongst one or more persons, one or more subpopulations (e.g., private groups or public groups), or the public at-large. Examples of message network computing systems **110a** and **110b** may include the above-mentioned electronic accounts for Facebook™, Twit-

ter™, LinkedIn™, Instagram™, and Snapchat™, as well as YouTube™, Pinterest™, Tumblr™, WhatsApp™ messaging, or any other platform, including Khoros® community, that may be configured to promote sharing of content, such as videos, audio, or images, as well as sharing ideas, thoughts, etc. in a socially-based environment, such as an online community moderated by implementing structures and functions of a message moderation engine **164** and/or any other component of electronic message platform **160** or entity computer system **150**. According to some examples, content source computing systems **113a** and **113b** may include applications or executable instructions configured to promote an activity, such as a sports television network, a profession sports team, a news or media organization, a product producing or selling organization, and the like, or to promote sales or acquisition of goods or services. Content source computing systems **113a** and **113b** may implement websites, email, chat bots (e.g., “bots”), or any other digital communication channels, and may further implement electronic accounts to convey information via message network computing systems **110a** and **110b**.

In some examples, structures and/or functions of message network computing systems **110a** and **110b** and content source computing systems **113a** and **113b** may be implemented to operate similarly or equivalently as each other. Any electronic message may include a “tweet” (e.g., a message via a Twitter™ computing system), a “post” (e.g., a message via a Facebook™ computing system), or any other type of social network-based messages, along with any related functionalities, such as forwarding a message (e.g., “retweeting” via Twitter™), sharing a message, associating an endorsement of another message (e.g., “liking” a message, such as a Tweet™, or sharing a Facebook™ post, etc.), and any other interaction that may convey or otherwise may generate a “response” or electronic posts to an online community from one or more electronic accounts at relatively increased rates of transmissions or propagation to address concerns or statements that may otherwise affect a reputation of a brand. As such, message moderation engine **164** may be configured to moderate electronic posts to ensure compliance with policies, terms of use, legal regulations, and any other rule. According to various examples, an electronic message received via a network **111** can include any type of digital messaging that can be transmitted over any digital network (e.g., the Internet, etc.).

Entity computing system **150** is shown to include a computing device **120** and display configured to generate a user interface, such as a message moderation interface **122**. Entity computing system **150** may also include a server computing device **152**, which may include hardware and software, or a combination thereof, configured to implement an electronic message platform **160** configured to moderate a queue of electronic messages based on a user input that may be configured to perform multiple actions. In some examples, a user input to perform multiple actions may be a common user input, which may include a common gesture, such as a movement or interaction of one or more portions of a user **121** (e.g., a motion of a finger in one direction, and, optionally a reverse direction). Hence, a gesture, as a user input into a gesture-based interface, may facilitate moderation of electronic messages **130** and **134**, at least in some examples. In various examples, user **121** may be an agent acting in a role of a “moderator,” or as a user in any other function or role (e.g., a supervisory moderator, a quality control moderator, etc.).

Message moderation engine **164** may be configured to include logic to cause generation of a message moderation

interface **122** at a computing device **120** to facilitate moderation or filtering of one or more electronic messages. Message moderation interface **122** may be configured to receive user input **124** to activate or enable automatic disposition (e.g., “auto disposition”) or automatic application of an action, such as automatically approving an unmoderated electronic message as one or more portions of an electronic message translates (e.g., visually moves or scrolls) to a specific position relative to a portion of interface **122**. For example, automatic approval of an unmoderated electronic message may be implemented when any or all portions of a message transitions into a post-view set of messages **127b** (e.g., responsive to a gesture). According to some examples, message moderation engine **164** may include logic that constitutes a computer program or set of executable instructions for a moderator application.

In some examples, message moderation engine **164** may be configured to access unmoderated electronic messages **130** and **134** for disposition in a queue **124** of electronic messages for moderation. As shown, message moderation interface **122** may include a viewable area bounded by a distance **123** over which one or more images of an electronic post may be accessed, reviewed, and acted upon, according to various examples. Distance **123** may be a function of a direction of, for example a gesture or user input. A viewable area of interface **122** may correlate to a coordinate system or a grid of pixels relative to, for example, a reference **125**. Note, too, that viewable area of interface **122** may represent a display field or matrix of pixels. As an example, a position of a generated image that may be presented or displayed within message moderation interface **122** may be referenced relative to a reference point **125**. Reference point **125** may serve as an origin (e.g., having a coordinate of 0,0) for a Y-axis and an X-axis. Thus, values of Y may extend from Y_n (e.g., a minimum Y value) adjacent a bottom edge of message moderation interface **122** to Y_x (e.g., a maximum Y value) adjacent a top edge of message moderation interface **122**. Further, values of X may extend from X_n (e.g., a minimum X value) adjacent a left edge to X_x (e.g., a maximum X value) adjacent a right edge of message moderation interface **122**. Note that descriptions, as shown, of a “bottom” edge (i.e., at which Y is Y_n , such as a “0th” pixel value), a “top” edge (i.e., at which Y is Y_x , such as a “1920th” pixel value), a “right” edge, and a “left” edge are not intended to be restrictive, but rather, descriptive of an example of delineations between, for example, non-viewable content and viewable content of a queue **124** of electronic messages **140** to **146**, as applied to a moderator application.

According to some examples, a moderator application may be configured to establish queue **124** of electronic messages **140** to **146**, and filter queue **124** of one or more electronic messages (e.g., unmoderated electronic messages) to identify whether to apply an one or more actions (e.g., at least one of which may be performed automatically) in association one of electronic messages **140** to **146** (e.g., unmoderated electronic messages). In at least one implementation, a moderator application (e.g., message moderator engine **164**) may be configured to identify data representing each of electronic messages **140** to **146** to generate images for presentation in message moderation interface **122**. In the example shown, queue **124** of electronic messages may represent data stored in memory that constitutes queue **124**, whereby image data representing electronic message **140** and a portion of electronic message **141** may, at a point of time (e.g., prior to a user input), be associated with a non-viewable region, such as one of pre-view messages

127a (e.g., prior to presentation in message moderation interface **122**). Also, image data representing electronic message **146** and a portion of electronic message **145** may also be a non-viewable region, such as one of post-view messages **127b** (e.g., subsequent to presentation in message moderation interface **122**). Note, however, electronic messages **142**, **143**, and **144** are viewable as presented or displayed in message moderation interface **122**.

A user input signal may originate at computing device **120** that is configured to implement a user interface as a computerized tool (or a distributed portion thereof), whereby a user input signal may be received into a moderator application (e.g., message moderation engine **164**) to facilitate a moderated action. In some examples, a moderated action may be configured to cause assignment of an approved state automatically to an electronic message, thereby “automatically” approving the electronic message. For example, an approved state may indicate that unmoderated content is transformed into moderated content, thus approved content. According to some implementations, a user input signal may be configured to cause presentation and termination of one or more portions of an electronic message, whereby the user input signal may originate from a user input (e.g., a common user input, such as a single or unitary input with which to perform an automatic action, or multiple automatic actions).

In at least one example, a user input signal may originate from a gesture-based user input, such as a touch-sensitive screen or display, a touch-sensitive pad (e.g., a touch pad), or any other gesture-based user input as well as any other type of user input (e.g., other than gesture-based user inputs). In diagram **100**, user inputs may be represented as implementing, for example, scrolling inputs **126a** and **126b** in one direction (e.g., scrolling from a bottom edge to a top edge), whereas scrolling input **126c** may represent implementation of a common user input in, for example, a reverse direction (e.g., scrolling from a top edge toward a bottom edge). According to some examples, scrolling inputs **126a** to **126b** may be effectuated by detecting movement of a finger in a specific direction in association with a touch-sensitive user input (or any other gesture-based user input, including contactless gesture interfaces).

Further to the example set forth in diagram **100**, consider that electronic message **143** (i.e., Post #0399) may originate in pre-view message region **127a** of queue **124**. Responsive to a user input **126a** (or one or more user inputs **126a** of a common user input), electronic message **143** may transition (e.g., from a non-accessible, but viewable state) to an accessible state. In some examples, user input **126a** may cause an image of electronic message **143** to transition from a first region (or position) to a second region (or position). Upon transitioning into an accessible state, electronic message **143** may be identified using a given color, shape, size, or any other visual or perceptible indicator **148**. As such, different types of indicators may be used and are not limited solely to those that are visual. In an accessible state, electronic message **143** may be associated with a subset of one or more user other inputs **147**, which may be activated to perform one or more alternative actions. For example, a moderator **121** may identify an issue with electronic message **143** and activate a user input to, for example, reject, modify (e.g., edit), or forward electronic message **143**, whereby a forwarded message may be transmitted to a specialized or supervisory moderator. Or, other user inputs **147** may be configured to implement any other action. Upon implementation of an alternative action, notifications of rejections, modifications, and the like may be transmitted via

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messages **132** and **136** to originating computing devices **105** and **109** that may have submitted an electronic message or post.

An alternative action may be activated responsive, for example, to non-compliant or violative content. For example, moderator **121** may cause a gesture indicative of a disapproved or rejected electronic message or post as violating one or more policies or, perhaps, a specific policy or term or use (e.g., content contains hate-related speech, includes pornographic images, includes prurient content, or the like). The gesture (e.g., a touch-sensitive user input, or scrolling using a mouse or scroll wheel) may indicate that an electronic message or post is to be moved within a given region of an interface **122**. In response, the electronic message or post may be deleted and message **132** or **136** is sent back to the submitting user **108** indicating deletion/refusal and, in some examples, a specific policy, rule, or regulation that indicates why the electronic message or post has been refused for posting during a moderation process.

Note, however, if moderator **121** or message moderation interface **122** of computing device **120** do not cause activation of an alternative action in an accessible state, then another user input **126b** may cause electronic message **143** to exit the accessible state. Responsive to a user input **126b** (or one or more user inputs **126b** of a common user input), electronic message **143** may transition (e.g., from an accessible and viewable state) to a non-accessible state, or to an approved state automatically (e.g., using a common user input or gesture). In some examples, user input **126b** may cause an image of electronic message **143** to transition from a second region (or position) to a third region (or position), whereby the transition relative to the third region may cause an automatic action to be applied to electronic message **143** (e.g., an action to automatically approve electronic message **143**, or to automatically apply any other default or predicted action).

In some examples, a moderator application (e.g., message moderation engine **104**) may be configured to detect one or more user inputs **126c**, which may be a common user input (e.g., same as user inputs **126a** and **126b**), but optionally in a different or reverse direction. For example, a common user input may be a “moving” or “scrolling” gesture relative to, for example, a touch-sensitive user input. As such, user inputs **126a**, **126b**, and **126c** may be implemented using the same gesture or user input regardless of direction (e.g., user input **126c** may be in a reverse direction relative to user inputs **126a** and **126b**). User input **126c** (and associated signal) may be configured to cause presentation of any portion of an electronic message, such as electronic message **143**, in message moderation interface **122** subsequent to scrolling that message into a post-view message region **127b**. As such, user input **126c** may be configured to cause re-display of at least a portion of electronic message **143**, which had been previously approved automatically. In some examples, user input **126c** may cause electronic message **143** to enter a review state in which moderator **121** may review a previously-approved electronic message. Subsequently, after a review of re-displayed electronic message **143**, user inputs **126b** may be implemented to again approve automatically that message for publication into a community of electronic messages and posts.

In view of the foregoing, structures and/or functionalities depicted in FIG. 1 as well as other figures herein, illustrate one or more applications, algorithms, systems and platforms to leverage or otherwise implement common user inputs, such as common gestures, to cause one or more actions

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automatically to be applied to an electronic message or post under moderation and review, according to some embodiments.

According to one or more examples, a moderation application and its functionalities (as well as any other functionalities described herein) are configured to reduce user behavior required to moderate content for posting to one or more social media networks, using one or more software platforms on computing devices over one or more distributed data networks (e.g., cloud-based data networks) to review, approve, reject, or perform other actions automatically on individual electronic messages submitted for posting without performing active actions (e.g., mouse or button clicks, or employing multiple different inputs in a touch-sensitive interface). Rather, a moderation application may be implemented to employ a gesture-based user interface to correlate a user input (e.g., a common user input) to select and approve actions to be performed automatically based on values of the user input. As such, an electronic message may be automatically approved without requiring different manual user inputs, thereby obviating a need to select an “approve” user input interface element.

Implementation of a moderator application, as described herein, may reduce or negate fatigue that otherwise may afflict moderators **121**, which, in turn, may reduce or negate lapses of focus, inadvertent posts, errors, and the like. This may enhance user efficiency and accelerate a moderation process. Therefore, a moderation application may effectuate a computerized tool that may reduce cost and resources that otherwise may be necessitated to, for example, review and correct posts. Further, a moderator application may facilitate preservation of the reputation, trustworthiness, and reliability of an online community.

Note that message moderation interface **122** may implement, for example, functionalities provided by Khoros® Manage View user interface and a Khoros® Community software platform. Any of described elements or components set forth in FIG. 1, and any other figure herein, may be implemented as software, applications, executable code, application programming interfaces (“APIs”), processors, hardware, firmware, circuitry, or any combination thereof.

FIG. 2 depicts an example of a message moderation engine, according to various examples. Diagram **200** depicts a message moderation engine **264** configured to, at least in some examples, provide functionalities of a moderator application, whereby moderated electronic messages **201a** and posts may be received and stored in a repository or memory, such as an unmoderated message data repository **202**. Further, message moderation engine **264** may be configured to generate a moderated electronic message **201c** or post for storage in a moderated message data repository **210**, which may store a data arrangement that constitutes an online community. As such, moderated electronic message **201c** may be viewable or accessible via any network **211** as message data to any authorized member of an online community.

Diagram **200** depicts a message moderation engine **264** including a queue manager **271**, an image generator **272**, a moderation processor **274**, and an action generator **280**. Queue manager **271** may include logic configured to manage storage of unmoderated electronic messages **201a** in unmoderated message data repository **202**. Further, queue manager **271** may also include logic configured to fetch data representing unmoderated messages from repository **202** for image processing to display a formatted electronic message as part of a queue of electronic messages under moderation, as displayed in a moderator user interface. In accordance

with some embodiments, queue manager **271** may be configured to arrange electronic messages for moderation as a function of a message attribute, such as a level of priority, or any other message attribute.

Image generator **272** may include logic configured to receive data representing unmoderated messages from queue manager **271**, whereby the logic may be further configured to generate a queue of electronic messages including any type of content, such as text, audio, video, graphics, etc. In some examples, image generator **272** may generate data representing a queue of electronic messages including viewable and non-viewable imagery in preparation for display in a user interface. As shown, image generator **272** may include an image display controller **273** that may be configured to receive data representing values of user input data from a user input **210** associated with a user interface. Responsive to user input data, image display controller **273** may be configured to cause presentation of electronic messages, and portions thereof, in a viewable area of a user interface so as to facilitate moderation.

In some examples, user input **210** may be configured to generate gesture-based user input data (e.g., that can be embodied in an associated user input data signal). As such, user input **210** may be activated based on any number of gestures, such as scrolling, pinching, and tapping, as well as tipping, shaking, or tilting a device, among other gestures. In some examples, a gesture-based user input may be activated responsive to eye movement (e.g., eye-gaze tracking), or to motion of any part of a user (e.g., with or without direct contact).

Moderation processor **274** may include a gesture detector **275**, a correlator **276**, and an action selector **277**, according to at least some examples. In various examples, moderation processor **274** may be configured to determine and/or assign a state (e.g., an accessible state, an approved state, etc.) for an electronic message as a function of data values of a user input signal received from user input **210**. Gesture detector **275** may be configured to receive user input signal data from user input **210** to determine a region or position (e.g., relative to a reference) for any electronic message or post presented in a viewable area of a user interface. Correlator **276** may include logic configured to detect a region or position of an electronic message (or any portion thereof), and to correlate the region or position to one or more automatically-invoked actions (e.g., based on the user input, such as a common user input). Action selector **277** may be configured to receive data representing a correlation between a detected set of user input data values and actions (e.g., automatic actions) that are configured to trigger or otherwise activate as a function of the set or range of user input data values. Thus, action selector **277** may be configured to activate an action automatically (e.g., responsive to a common user input data signal) or to activate an alternative action based on, for example, receiving other user inputs (e.g., to reject, to edit, etc.) based on accessibility to an electronic message under moderation.

Consider an example in which gesture detector **275** may be configured to detect a first subset of values of a user input signal, whereby the first subset of values of a user input signal may be configured to cause presentation of an electronic message (or a portion thereof) in a user interface for a moderator. In some examples, correlator **276** may be configured to correlate a first subset of values to a range of values responsive to detected values of a signal. In some examples, correlator **276** may detect a range of pixels, each pixel being uniquely identifiable relative to a reference (e.g., a bottom edge of a viewable area of a user interface, such as

Y=Y_n of FIG. 1). Based on a detected range of pixels, or a displacement of a number of pixels (or any other unit of an image) relative to a reference, correlator **275** may be configured to identify that an action correlates with a detected range of pixels. In some implementations, one or more ranges of pixels may correlate to one or more corresponding actions, one or more of which may be activated automatically.

In one example, correlator **276** may be configured to correlate user input data that may position an electronic message in a user interface at a region associated with a first range of pixel values, the first range of pixel values being associated with an accessible state. In response, action selector **277** may be configured to cause that electronic message to receive other user inputs to invoke alternate actions (e.g., to reject, edit, or forward a post), whereby action selector **277** may be activated to select a corresponding action to be performed. In another example, correlator **276** may be configured to correlate a second subset of user input data that may position an electronic message in a user interface in another region that may be associated with a second range of pixel values. The second range of pixels values may be associated with an approved state. In response, action selector **277** may be configured to cause approval of the electronic message, thereby enabling an approved electronic message to be published into an online community. In yet another example, correlator **276** may be configured to correlate a third subset of user input data that may re-position an electronic message in a visible area of a user interface so that an electronic message, such as a previously-approved message, may be reviewed and/or accessed. In some cases, the third subset of user input data may be similar or equivalent to the first subset or the second subset of data, but may be associated with a user input data signal indicative of scrolling in a reverse direction.

Action generator **280** may include logic configured to implement any number of actions responsive to any user input. In some examples, action generator **280** may be configured to implement one or more actions automatically as a function of the user input signal. Action generator **280** may include an automatic action engine **281**, which, in turn, may include a supplemental automatic action controller **282**. In addition, action generator **280** may include an alternative action engine **283**. Automatic action engine **281** may be configured to receive a signal from action selector **277** to implement or execute an action automatically as a function a region or position at which an electronic message (e.g., in a queue) may be detected in a viewable area of a user interface. For example, automatic action engine **281** may activate any of a multiple number of actions automatically based on detected subsets of user input signal values, whereby differently detected subsets of user input signal values may automatically invoke actions based on an accessible state or an approved state of an electronic message under moderation. Automatic action engine **281** may be configured to activate supplemental automatic action controller **282** to automatically implement a supplemental action, such as causing review of a previously-reviewed electronic message that may be scrolled down into a viewable area of a user interface for further review. Alternative action engine **283** may be activated in response to one or more user inputs associated with an electronic message in an accessible state, whereby the one or more user inputs may cause an accessible electronic message to be rejected, to be edited, to be forwarded, or the like.

FIG. 3 illustrates an exemplary layered architecture for implementing a moderator application, according to some

examples. Diagram 300 depicts application stack (“stack”) 301, which is neither a comprehensive nor a fully inclusive layered architecture for moderating electronic posts and messages of an online community or social media network, including performing automatic actions using, for example, gesture-based user inputs or the like. One or more elements depicted in diagram 300 of FIG. 3 may include structures and/or functions as similarly-named or similarly-numbered elements depicted in other drawings, or as otherwise described herein, in accordance with one or more examples, such as described relative to FIG. 1 or any other figure or description herein.

Application stack 301 may include an electronic message moderation engine layer 350 upon application layer 340, which, in turn, may be disposed upon any number of lower layers (e.g., layers 303a to 303d). Electronic message moderation engine layer 350 may be configured to provide functionality and/or structure to implement a moderator application, as described herein. Electronic message moderation engine layer 350 and application layer 340 may be disposed on data exchange layer 303d, which may be implemented using any programming language, such as HTML, JSON, XML, etc., or any other format to effect generation and communication of requests and responses among computing devices and computational resources constituting an enterprise and an enterprise resource planning application and/or platform. Data exchange layer 303d may be disposed on a service layer 303c, which may provide a transfer protocol or architecture for exchanging data among networked applications. For example, service layer 303c may provide for a RESTful-compliant architecture and attendant web services to facilitate GET, PUT, POST, DELETE, and other methods or operations. In other examples, service layer 303c may provide, as an example, SOAP web services based on remote procedure calls (“RPCs”), or any other like services or protocols (e.g., APIs). Service layer 303c may be disposed on a transport layer 303b, which may include protocols to provide host-to-host communications for applications via an HTTP or HTTPS protocol, in at least this example. Transport layer 303b may be disposed on a network layer 303a, which, in at least this example, may include TCP/IP protocols and the like. Note that in accordance with some examples, layers 303a to 303d facilitate implementation of a risk management data channel as set forth herein.

As shown, electronic message moderation engine layer 350 may include (or may be layered upon) an application layer 340 that includes logic constituting a community syndication controller layer 320, a message management controller layer 330, a presentation engine 310, and an asset layer 312. According to some examples, community syndication controller 320 may include logic to implement an online community, such as the Lithium Community (formally of Lithium Technologies, LLC), Khoros Communities of Khoros, LLC of Austin Tex., or “Atlas” Communities of Khoros, LLC of Austin Tex., among other online community configurations. Further, message management controller layer 330 may include logic to implement at least some functionality provided by an application configured to operate in accordance with “Modern Chat”-related technologies and “Khoros Care”-related technologies, both of Khoros, LLC of Austin Tex., among other technologies. Presentation engine layer 342 may include logic configured to facilitate presentation of electronic messages, as well as associated functionalities (e.g., to detect position or ranges of pixels associated with a displayed electronic message under moderation). In some examples, an asset layer 312 may be

configured to implement node.js, which may be a cross-platform, JavaScript runtime environment. In some cases, node.js may execute JavaScript code independent of a browser, or any other protocol, any other programming language, or any other set of executable instructions. Node.js is maintained by the Linux Foundation of San Francisco, Calif., USA.

Any of the described layers of FIG. 3 or any other processes described herein in relation to other figures may be implemented as software, hardware, firmware, circuitry, or a combination thereof. If implemented as software, the described techniques may be implemented using various types of programming, development, scripting, or formatting languages, frameworks, syntax, applications, protocols, objects, or techniques, including, but not limited to, Python™, ASP, ASP.net, .Net framework, Ruby, Ruby on Rails, C, Objective C, C++, C#, Adobe® Integrated Runtime™ (Adobe® AIR™) ActionScript™, Flex™, Lingo™, Java™, JSON, Javascript™, Ajax, Perl, COBOL, Fortran, ADA, XML, MXML, HTML, DHTML, XHTML, HTTP, XMPP, PHP, and others, including SQL™, SPARQL™, Turtle™, etc., as well as any proprietary application and software provided or developed by Khoros, LLC, or the like. The above described techniques may be varied and are not limited to the embodiments, examples or descriptions provided.

FIG. 4 is a flow diagram as an example of moderating an electronic message, according to some embodiments. Flow 400 may be an example of facilitating moderation of electronic messages, postings, content, etc., to determine whether to include electronic messages in an electronic community (or any subset thereof). In some examples, a subset of an electronic community (e.g., online community) may include any number of electronic messages or posts that may relate to each other by subject matter or any other classification. As an example, an online community may be subdivided based on whether content relates to a “forum” (e.g., content directed to resolving a problem), an “idea” (e.g., content directed to proposed suggestions related to any item, such as a product), a “frequently-asked question” (e.g., content directed to searchable solutions that are determined to be effective), an “expert” classification (e.g., directed to users or electronic accounts associated with expert-based content), and any other classification or categorization.

At 402, a moderator application (or a subset of executable instructions) may be configured to perform one or more actions automatically, such as approving an electronic message as a post in the electronic community, according to some examples. In some implementations, a moderator application may be implemented in association with a computing platform configured to host a syndication of subsets of electronic messages (e.g., an electronic community). A moderator application may be configured to filter a queue of one or more electronic messages (e.g., unmoderated electronic messages) to, for example, identify whether to apply an one or more actions (e.g., at least one of which may be performed automatically) in association electronic message (e.g., an unmoderated electronic message)

At 404, a user input signal may be received, whereby the user input signal may be configured to cause presentation of an electronic message at a user interface as a computerized tool to facilitate a moderated action of the moderator application. In some examples, a moderated action may be configured to cause assignment of an approved state automatically to an electronic message, thereby “automatically” approving the electronic message. For example, an approved state may indicate that unmoderated content is transformed

into moderated content. According to some implementations, a user input signal may be configured to cause presentation and termination of one or more portions of an electronic message, whereby the user input signal may originate from a user input (e.g., a common user input, such as a single or unitary input with which to perform an automatic action, or multiple automatic actions). In at least one example, a user input signal may originate from a scroll bar interface element (e.g., a vertical scroll bar) or a mouse-based user input, such as a mouse wheel configured to implement scrolling functionalities. Note, however, any other user input may be implemented. In some examples, touch sensitive-based user inputs may be implemented (e.g., touch-sensitive screens or touch-sensitive pads (e.g., touch pads)), as well as one or more voice-based or audio-based inputs (e.g., speech-to-text/input computer program). Another example of a user input may include eye-gaze detection and tracking devices and/or software, or any other technology configured to convey a user input to a moderator application.

At **406**, a first subset of values of a user input signal may be detected, whereby the first subset of values of a user input signal may be configured to cause presentation of an electronic message (or a portion thereof) in a user interface. In some examples, a first subset of values may correlate to, or may be associated with, a range of values responsive to detected values of a signal.

At **408**, a first state may be assigned to an electronic message based on a first subset of values. In at least one example, a first state associated with an electronic message may be indicative of an accessible state. An electronic message may be detectable in an accessible state in association with a user interface, whereby an electronic message may be accessible to receive another user input (e.g., a second user input). An example of another user input may be associated with activating a user interface element (e.g., a button) or causing a touch-sensitive input in a specific direction. In one example, another user input may not be activated or detected in association with an electronic message in an accessible state, whereby the electronic message may transition to a second state (e.g., automatically) responsive to a user input signal (e.g., a common user input signal). In another example, another user input may be activated or detected in association with an electronic message in an accessible state. In response, a moderator application may be configured to provide and detect the other user input (e.g., a second user input), which may be configured to transition an electronic message from a first state to a rejected state, an editable state, or a forwarded state, among others.

Responsive to detecting a user input to transition an electronic message to a rejected state, a moderator application can classify the message as “rejected,” prevent the message from being transitioned into an “approved” state, generate a notification to transmit to an author of the message (i.e., notifying the author of rejection) with optional reasons to facilitate correction, and to implement any other function. Upon detecting a user input to transition an electronic message to an editable state, a moderator application can classify the message as “editable,” enable a user (e.g., a moderator, an agent, or other users) to modify the message to, for example, redact a profane word. The moderator application can be further configured to generate a notification to transmit to an author of the message (i.e., notifying the author of a modification) and to implement any other function. Thereafter, the message may advance to an approved state, in at least some cases. Another user input may be configured to cause an electronic message to transi-

tion to a forwarded state, whereby a moderator application can be configured to classify the message as “forwarded,” enable the message to be transmitted to another user (e.g., an expert moderator, a supervisory agent, or other users). Thereafter, the message may advance to an approved state, in at least some cases.

At **410**, a second subset of values of a user input signal can be detected, whereby the second subset of values of a user input signal may be configured to cause termination of the presentation of at least a second portion of the electronic message in a user interface. In at least one example, detection of a first subset and a second subset of values of a user input signal may include computing displacement of a number of pixels (or any other unit of an image) relative to a reference associated with the user interface, and detecting a displacement value a function of the number of pixels to determine a transition from at least one of the first state and the second state of the electronic message to another state. For example, a user interface element may be configured to cause an electronic message (or post) to modify its presentation by scrolling in a first direction. In at least one other example, detection of a first subset and a second subset of values of a user input signal indicative of a position of an electronic message (or an image thereof), as presented or displayed on a user interface.

Further to **410**, a first subset of values of a user input signal may be detected by, for example, detecting that a first subset of values may be indicative that a first portion of an electronic message is viewable in a user interface (e.g., a first portion of an electronic message may enter a user interface at a first edge of a user interface). A second subset of values of a user input signal may be indicative that a second portion of an electronic message is not viewable in a user interface (e.g., a second portion of an electronic message may exit a user interface at a second edge of a user interface). In some implementations, a first edge and a second edge may be a bottom edge and a top edge, respectively, of a user interface (e.g., a viewable portion thereof).

At **412**, a second state may be assigned to an electronic message based on a second subset of values of a user input signal. A second subset of values may include a range of values indicative of activating a transition to a second state (e.g., indicative of moderator intent). In some examples, a second state is an “approved” state.

At **414**, execution of instructions may cause performance of a moderated action automatically responsive to transitioning an electronic message from a first state to a second state (e.g., from an accessible state to an approved state). In some examples, a third subset of values of a user input signal may be configured to cause presentation of any portion of an electronic message in a user interface (e.g., re-display of at least a portion of an electronic message). In some examples, a third subset of values may be detected subsequent to detecting a second subset values of a user input signal (e.g., subsequent to an approved state). Further, another state to an electronic message based on a third subset of values. In at least one example, the third subset of values may indicate a review of an approved electronic message. According to some examples, a third subset of values may be equivalent to (or overlap) one or more other subsets of values. A third subset of values may be equivalent to at least portions of either a second subset of values (e.g., to revoke approval) or a first subset of values (e.g., to re-access an electronic message in an accessible state). A third subset of values may be detected at a subsequent period or unit of time. In at least one case, detecting a third subset of values may include receiving a user input signal specifying data representing a

reverse displacement of a number of pixels. As such, a user input signal may originate from a common user interface element, and may be in a second or reverse direction, such as scrolling down (e.g., a reversed direction) to pull down or re-display an approved electronic message through a top of a user interface.

FIG. 5 is a flow diagram as another example of moderating a number of electronic message, according to some embodiments. Flow 500 may begin at 502, at which a moderator application may be activated to filter a number of queues each including a subset of electronic messages. A moderator application may be implemented in association with a computing platform, which may be configured to host a syndication of electronic messages (e.g., an online community). At 504, signals configured to cause presentation of a number of electronic messages at a user interface may be received. In some examples, a moderator application implemented in electronic communication with a user interface may configure the user interface as a computerized tool to facilitate moderated actions.

At 506, positions at which to present electronic messages may be detected, whereby one or more positions may be indicative of one or more states that may activate one or more actions. At 508, subsets of electronic messages may be filtered to facilitate approval automatically of approved electronic messages.

At 510, a determination may be made as to whether to perform an automatic action, such as action that specifies that an electronic message is approved, for example, to post within an online community. If no, flow 500 may transition to 512, at which accessibility to electronic messages may be detected to enable performance of an action at 514. Examples of such actions include rejecting, modifying, or forwarding an electronic message. Otherwise, flow 500 may transition to 516, whereby performance of an automatic action may be indicative of approving an electronic message or post automatically (e.g., using a common user input).

At 516, a determination may be made as to whether to perform a supplemental action, such as action that specifies that an approved electronic message may be reviewed by, for example, re-displaying the electronic message in a user interface. If no, flow 500 may transition to termination, at which the approved electronic message or post may be published into an online community. If yes, flow 500 may transition to 518, whereby accessibility of electronic messages may be detected. Accessible message may be configured to receive other user inputs to perform other actions at 520 (e.g., other action including, but not limited to, rejecting, modifying, or forwarding an electronic message).

FIG. 6 depicts another example of a message moderation engine, according to various examples. Diagram 600 depicts a message moderation engine 664 configured to, at least in some examples, provide functionalities of a moderator application, whereby moderated electronic messages 601a and posts may be received and stored in a repository or memory, such as an unmoderated message data repository 602. Further, message moderation engine 664 may be configured to generate a moderated electronic message 601c or post for storage in a moderated message data repository 610, which may store a data arrangement that constitutes an online community. As such, moderated electronic message 601c may be viewable or accessible via any network 611 as message data to any authorized member of an online community.

Diagram 600 depicts a message moderation engine 664 including a queue manager 671, an image generator 672, a moderation processor 674, and an action generator 680. As

shown, image generator 672 may include an image display controller 673, moderation processor 674 may include a gesture detector 675, a correlator 676, and an action selector 677, and action generator 680 may include an automatic action engine 681, which, in turn, may include a supplemental automatic action controller 682. In addition, action generator 680 may include an alternative action engine 683. Message moderation engine 664 may include structures and/or functionalities set forth in FIGS. 1 and 2, or any other figure, and may include additional structures and/or functionalities described in FIGS. 1 and 2 and elsewhere herein. In one or more implementations, elements depicted in diagram 600 of FIG. 6 may include structures and/or functions as similarly-named or similarly-numbered elements depicted in other drawings.

According to various examples, message moderation engine 664 may include other or additional functionality. For example, moderation processor 674 may include logic configured to implement a rule processor 678 and a message modifier 679, and automatic action engine 681 may include logic configured to implement an automatic action predictor 684.

In at least one embodiment, moderation processor 674 may be configured to provide automatically a modified electronic message or post in a user interface with which a moderator may review and approve automatically, based on a user input signal data and correlation thereto as described herein. In this case, moderation processor 674 may be configured to provide a “modification assist” functionality, whereby logic may be configured to propose modifications to an unmoderated message that a moderator may approve automatically (e.g., without activating another user input). For example, moderation processor 674 may be configured to detect a noncompliant message attribute, such as a typographical error or a profane word, and may be configured to propose a modified electronic message for approval. Rule processor 678 may be configured to access rule data in a rule data repository 614, whereby rule data may include any number of rules with which to analyze an unmoderated electronic message (or post) to determine whether to approve or modify the message (e.g., automatically).

Rule data stored in repository 640 may include data arrangements of various threshold values to determine whether an unmoderated message may comply with community terms (e.g., terms of use), conditions, policies, laws, regulations, rules, and the like. For example, rule data 614 may include rule data to reject, block, or redact variants of words, word stems, tokens (in any language), and the like, that may be profane, libelous, perjurious, hateful, and the like. Message modifier 679 may include logic configured to detect violations or breaches of terms or policies, and to modify an electronic message (e.g., by replacing words, images, etc., by redacting inappropriate content, etc., and the like). In one example, rule data stored in repository 640 may define threshold or conditions to determine whether an electronic message conforms with, for instance, the Americans with Disabilities Act (“ADA”) or the like.

In at least one embodiment, an automatic action predictor 684 may include logic configured to provide “action assistance” to a moderator, whereby automatic action predictor 684 may predict whether to select or modify a default action to implement automatically a predicted disposition of an electronic message. As an example, automatic action predictor 684 may be configured to access model data 612 to compute or calculate, based on various attributes (e.g., message attribute data) of an electronic message, a predicted disposition of an electronic message, such as a prediction to

approve, a prediction to reject, a prediction to edit, a prediction to forward, or any other predictive actions.

In some examples, message characterizer **620** may be configured to characterize one or more messages **601a** to determine or predict various characterized message attributes with which to assist in modifying a message or assist in providing a predicted action during moderation of one or more electronic messages. In some examples, message characterizer **620** may be configured to characterize, for example, a “newly-received” message **601a** for comparison against a data model in model data repository **612** to form a set of characterized data. Thus, message characterizer **620** may be configured to identify attributes and corresponding attributes that may be matched, as a data pattern, against patterns of data including correlated datasets stored in, for example, model data **612**. Matching patterns may facilitate the correlation of message characteristics to assist in providing an optimal response during a moderation process. In various examples, one or more rules implemented in executable instructions may be configured to generate an optimized electronic message for review by a moderator.

Message characterizer **620** may be configured to characterize content of message **601a** to identify or determine one or more attributes such as, for example, a status of an author or customer, a number of times an author or customer has had an electronic message rejected or modified, an associated URL, a referrer computing device, application, website, or link, one or more site visits, a number of days since a customer last interacted digitally with a website or application, an amount of time on a web page or web site, meta and cookie-related data, a location (including GPS coordinates, city, country, etc.), an operating system, a type of browser application, a device type (e.g., a hardware identification of a computing device), a MAC ID, an IP address, and other message attribute that may be characterized. One or more message characteristics may facilitate characterization or classification of unmoderated messages to, for example, optimize moderation processes at computing devices based on one or more detected or derived message characteristics. In some examples, message characterizer may derive a characteristic indicative of a priority value, or any other factor that may affect moderation of electronic messages.

Further, message characterizer **620** may be configured to detect and parse the various components of an electronic message, and further may be configured to perform analytics to analyze characteristics or attributes of one or more message components. As shown, message characterizer **620** may include a natural language processor **631** and a message component attribute determinator **632**. Natural language processor **631** may be configured to ingest data to parse portions of an electronic message (e.g., using word stemming, etc.) for identifying components, such as a word or a phrase. Also, natural language processor **631** may be configured to derive or characterize a message as being directed to a particular topic or subject matter based on, for example, sentiment analysis techniques, content-based classification techniques, and the like. In some examples, natural language processor **631** may be configured to apply word embedding techniques in which components of an electronic message may be represented as a vector, which may be a data arrangement for implement machine learning, deep learning, and other artificial intelligence-related algorithmic functions.

Message component attribute determinator **632** may be configured to identify characteristics or attributes, such as message attribute data **603**, for a word, phrase, topic, etc. In various examples, message attribute data **603** may be

appended, linked, tagged, or otherwise associated with a component to enrich data in, for example, model data repository **612**. A classification value may be a characteristic or an attribute of a message component, and thus may be used as a “tag.” Examples of message attribute data **603** are depicted as classification data **603a** (e.g., an attribute specifying whether a component or message may be classified as, for example, being directed to particular subject matter, or being direct to non-compliant messaging), media type data **603b** (e.g., an attribute specifying whether a component may be classified as being associated with a Tweet™, an email, a post, a webpage, a text message, etc.), channel type data **603c** (e.g., an attribute specifying whether a component may be associated with a type of social networking system, such as Twitter™), and the like. Message attribute data **603** may also include context metadata **603d**, which may include attributes that specify environmental data or contextual data, such as a context in which an electronic message is received for submission into a particular community. For instance, context metadata **603d** may include data representing a time of day, a year, a season, a subject matter-related context, a product-related context, an idea-related context, a solution-related context, a service-related context, a payment-related context, etc.

Also, message component attribute determinator **632** may be configured to generate a tag including metadata **603d** may refer to a context in which a word is used in a transmission of a number of electronic messages (e.g., a tag indicating a marketing campaign, a tag directed to a particular community or sub-community, or the like). Also, a tag including metadata **603d** may refer to an industry or activity (e.g., a tag indicating an electronic message component relating to autonomous vehicle technology, or basketball), etc. Furthermore, message attribute data **603** may also include profile data **603e**, which may include attributes that describe, for example, demographic data regarding an author or a customer of a received electronic message, or the like. Other metadata **603f** may be associated with, or tagged to, a word or other message component. As such, other metadata **603f** may include a tag representing a language in which the word is used (e.g., a tag indicating English, German, Mandarin, etc.). In some cases, other metadata **603d** may include data representing values of computed threshold values or classification values (e.g., a tag may indicate a value of an amount of likelihood of generating a response, etc.). Message attribute data **603**, and the corresponding tags, may be stored in a data repository.

Data correlator **633** may be configured to statistically analyze components and attributes of electronic messages and posts bound for submission to a community to identify predictive relationships between, for example, an attribute and a value predicting a likelihood that an electronic message may invoke a specific predictive action, which may be moderated by an agent, a moderator, or the like. According to some embodiments, data correlator **633** may be configured to classify and/or quantify various “attributes” and/or “received electronic messages” (and exchanges thereof) by, for example, applying machine learning or deep learning techniques, or the like.

In one example, data correlator **633** may be configured to segregate, separate, or distinguish a number of data points (e.g., vector data) representing similar (or statistically similar) attributes or received electronic messages, thereby forming one or more sets of clustered data. Clusters of data (e.g., predictively grouped data) may be grouped or clustered about a particular attribute of the data, such as a source of data (e.g., a channel of data), a type of customer (e.g., a loyal

customer), a degree of urgency for an issue (e.g., a customer is, a type of language, a degree of similarity with synonyms or other words, etc., or any other attribute, characteristic, parameter or the like. In at least one example, a cluster of data may define a subset of electronic messages having one or more similarities (e.g., a statistically same topic) that may be configured to characterize a class of messages for purposes of selecting and applying predictively one or more rules or more actions to unmoderated message **601a**.

While any number of techniques may be implemented, data correlator **633** may apply “k-means clustering,” or any other clustering data identification techniques to form clustered sets of data that may be analyzed to determine or learn optimal classifications of data and associated predictive responses thereto. In some examples, data correlator **633** maybe configured to detect patterns or classifications among datasets **633** and other data through the use of Bayesian networks, clustering analysis, as well as other known machine learning techniques or deep-learning techniques (e.g., including any known artificial intelligence techniques, or any of k-NN algorithms, linear support vector machine (“SVM”) algorithm, regression and variants thereof (e.g., linear regression, non-linear regression, etc.), Bayesian inferences and the like, including classification algorithms, such as Naïve Bayes classifiers, or any other statistical or empirical technique).

In the example shown, data correlator **633** may be configured to implement any number of statistical analytic programs, machine-learning applications, deep-learning applications, and the like. Data correlator **633** is shown to have access to any number of predictive models, such as predictive model **690a**, **690b**, and **690c**, among others. In this implementation, predictive data model **690a** may be configured to implement one of any type of neuronal networks to predict an action or disposition of an electronic message under moderation, so as to minimize a number of different user inputs in use (e.g., to enhance moderator efficiency and reduce fatigue). In this case, a neural network model **690a** includes a set of inputs **691** and any number of “hidden” or intermediate computational nodes **692** and **693**, whereby one or more weights **697** may be implemented and adjusted (e.g., in response to training). Also shown, is a set of predicted outputs **694**, such as “approve” or “reject,” among any other type of output.

In view of the foregoing, rule processor **678** and message modifier **679** may be configured to operate to predictively or proactively suggest modifications to an electronic message, thereby enabling a moderator to forgo accessing a non-compliant electronic message to reject, or modify the electronic message. Further, automatic action predictor **684** may be configured to analyze characterized message data of electronic message **601a** to provide a proposed default course of action or disposition of an electronic message. Therefore, an electronic message under moderation may be associated with a connotation of its predicted disposition, such as whether a message ought to be approved, reviewed, edited, rejected, forwarded, and the like. As such, a moderator may forego actively selecting an alternative action manually as automatic action predictor **684** may be configured to propose an alternative action that may be implemented automatically (e.g., automatically rejecting or editing a message).

Any of described elements or components set forth in FIG. 6, and any other figure herein, may be implemented as software, applications, executable code, application programming interfaces (“APIs”), processors, hardware, firmware, circuitry, or any combination thereof.

In some examples, computing devices using computer programs or software applications may be used to implement gesture-based community moderation, using computer programming and formatting languages such as Java®, JavaScript®, Python®, HTML, HTML5, XML, and data handling techniques and schemas. Moderation may be performed for various purposes ranging from reviewing/publishing content to moderating user posted content to a content, news, or video aggregation site such as YouTube® or a social media website or network such as Twitter®, Facebook®, Instagram®, Snapchat®, or others.

FIG. 7 depicts an example of a user interface configured to moderate electronic messages and posts, according to various examples. Diagram **700** depicts a user interface **701** configured to moderate electronic messages (or posts) in accordance with various methods described herein. In this example, a user interface includes a portion **702** describing a specific moderator view indicating an associated queue of unmoderated electronic messages in an active user interface (“UP”) portion **731**. User interface **701** depicts a presentation of a number of electronic messages under moderation, such as messages **737d**, **737b**, **737**, **737a**, and **737c**. User inputs, such as gesture-based user inputs **726a**, **726b**, and **726c** may be configured to scroll messages **737d**, **737b**, **737**, **737a**, and **737c** up and down, whereby one or more automatic actions may be applied to an electronic message. For example, electronic message **737** may be detected by a moderator application, as an example, as being displaced into a region or position that automatically assigns or places electronic message **737** into an accessible state. In this state, a visual indicator **748** indicates that electronic message **737** may be accessible in response to, for example, alternative actions activated by one or more user inputs **747**. If no alternative actions are activated via user input **747**, then one or more user input **726b** may cause electronic message **737** to scroll off a visible area of user interface **701**, thereby automatically approving that message.

FIG. 8 depicts another example of a user interface configured to moderate electronic messages and posts using proposed modified electronic messages, according to various examples. Diagram **800** depicts a user interface **801** configured to moderate electronic messages (or posts) in accordance with various methods described herein. In this example, a user interface includes a portion **802** describing a specific moderator view indicating an associated queue of unmoderated electronic messages in an active user interface (“UP”) portion **831**. Note that user interface **801** includes a user input **807** to cause a moderator application to approve scrolled posts, or to disable that functionality.

User interface **801** depicts a presentation of a number of electronic messages under moderation, such as messages **837d**, **837b**, **838**, **837a**, and **837c** in a queue, whereby message **838** is a modified version of original electronic message **837**, which is presented or displayed at its side. In this example, a moderator application or other logic may be configured to detect inappropriate or noncompliant text **889**, and propose alternative words or text **888**. In this state, a visual indicator **848** indicates that electronic message **838** may be accessible in response to, for example, alternative actions activated by one or more user inputs **847**, such as whether to undo or reject proposed alternate modifications **888**. User inputs, such as gesture-based user inputs **826a**, **826b**, and **826c** may be configured to scroll messages **837d**, **837b**, **838**, **837a**, and **837c** up and down, whereby one or more automatic actions may be applied to an electronic message. If no alternative actions are activated via user input **847**, then one or more user input **826b** may cause electronic

message **838** to scroll off a visible area of user interface **801**, thereby automatically approving that a modified version of electronic message **837**.

FIG. **9** depicts yet another example of a user interface configured to moderate electronic messages and posts using predictive default actions, according to various examples. Diagram **900** depicts a user interface **901** configured to moderate electronic messages (or posts) in accordance with various methods described herein. In this example, a user interface includes a portion **902** describing a specific moderator view indicating an associated queue of unmoderated electronic messages in an active user interface (“UI”) portion **931**. Note that user interface **901** includes a user input **907** to cause a moderator application to automatically apply a predicted default action to posts scroll up beyond visibility of user interface **901**, or to disable that functionality.

User interface **901** depicts a presentation of a number of electronic messages under moderation, such as messages **937d**, **937b**, **937**, and **937a** in a queue, whereby a moderator application predictively calculates predictive default actions each of the messages. For example, messages **937d**, **937b**, **937**, and **937a** are shown to be associated with predicted default actions (“Reject”) **941**, (“Approve”) **942**, (“Approve”) **944**, and (“Approve”) **946**, respectively. User inputs, such as gesture-based user inputs **926a**, **926b**, and **926c** may be configured to scroll messages **937d**, **937b**, **937**, and **937a** up and down, whereby one or more automatic actions and dispositions may be applied to an electronic message. If no alternative actions are activated via user input **947**, as an example, then one or more user input **926b** may cause electronic messages **937d**, **937b**, **937**, and **937a** to scroll off a visible area of user interface **901**, whereby predicted default actions may be applied. Thus, electronic message **937d**, if no user inputs **947** are detected, may be rejected automatically as a predicted default disposition, and based on a common user input or gesture.

FIG. **10** is a flow diagram as another example of moderating a number of electronic message using either proposed modified message content or predicted automatic default actions, or both, according to some embodiments. Flow **1000** may begin at **1002**, at which a moderator application may be activated to filter a number of queues each including a subset of electronic messages. A moderator application may be implemented in association with a computing platform, which may be configured to host a syndication of electronic messages (e.g., an online community). At **1004**, signals configured to cause presentation of a number of electronic messages at a user interface may be received. In some examples, a moderator application implemented in electronic communication with a user interface may configure the user interface as a computerized tool to facilitate moderated actions. At **1006**, positions at which to present electronic messages may be detected, whereby one or more positions may be indicative of one or more states that may activate one or more actions.

At **1008**, a moderator application may be configured to cause display of a modified electronic message based on, for example, detection of non-compliant message components (e.g., profane text), or the like. At **1010**, a predicted automatic action may be predicted so as to implement a default action automatically, whereby the predicted automatic action may be any default action, such as approval, rejection, or the like. At **1012**, a detected change in position of an electronic message in a viewable area of a user interface may invoke or cause activation of an automatic action, such as a predicted automatic default action.

FIG. **11** depicts an example of a system architecture to provide a computing platform to host a syndication of electronic messages and posts for moderation, according to an example. Content, messages, and/or posts may be stored in (or exchanged with) various communication channels or storage devices as unmoderated or moderated content. For example, various units of content may be stored using one or more of a web application **1124**, an email application service **1126**, an electronic messaging application **1128** (e.g., a texting or messenger application), social networking services **1130** and a directory services repository **1132** (e.g., an AWS® directory service provided by Amazon Web Services, Inc., or any other directory service). A server **1115** may implement a moderator application **1150** for use by moderator-users and a community application **1152** for use by client applications and devices. As an example, server **1115** may be a web server providing the applications **1150** and **1152** via networks **1110**. As an example, a client computing device may be implemented and/or embodied in a computer device **1105**, a mobile computing device **1106** (e.g., a smart phone), a wearable computing device **1107**, or other computing device. Any of these client computing devices **1105** to **1107** may be configured to transmit content (e.g., as electronic posts) from the store **1116**, and may be configured to receive content (e.g., other electronic posts constituting an online community).

FIG. **12** illustrates examples of various computing platforms configured to provide various functionalities to components of an electronic message platform **1200** to moderate electronic messages. Computing platform **1200** may be used to implement computer programs, applications, methods, processes, algorithms, or other software, as well as any hardware implementation thereof, to perform the above-described techniques.

In some cases, computing platform **1200** or any portion (e.g., any structural or functional portion) can be disposed in any device, such as a computing device **1290a**, mobile computing device **1290b**, and/or a processing circuit in association with initiating any of the functionalities described herein, via user interfaces and user interface elements, according to various examples.

Computing platform **1200** includes a bus **1202** or other communication mechanism for communicating information, which interconnects subsystems and devices, such as processor **1204**, system memory **1206** (e.g., RAM, etc.), storage device **1208** (e.g., ROM, etc.), an in-memory cache (which may be implemented in RAM **1206** or other portions of computing platform **1200**), a communication interface **1213** (e.g., an Ethernet or wireless controller, a Bluetooth controller, NFC logic, etc.) to facilitate communications via a port on communication link **1221** to communicate, for example, with a computing device, including mobile computing and/or communication devices with processors, including database devices (e.g., storage devices configured to store atomized datasets, including, but not limited to triplestores, etc.). Processor **1204** can be implemented as one or more graphics processing units (“GPUs”), as one or more central processing units (“CPUs”), such as those manufactured by Intel® Corporation, or as one or more virtual processors, as well as any combination of CPUs and virtual processors. Computing platform **1200** exchanges data representing inputs and outputs via input-and-output devices **1201**, including, but not limited to, keyboards, mice, audio inputs (e.g., speech-to-text driven devices), user interfaces, displays, monitors, cursors, touch-sensitive displays, touch-sensitive input and outputs (e.g., touch pads), LCD or LED displays, and other I/O-related devices.

Note that in some examples, input-and-output devices **1201** may be implemented as, or otherwise substituted with, a user interface in a computing device associated with, for example, a user account identifier in accordance with the various examples described herein.

According to some examples, computing platform **1200** performs specific operations by processor **1204** executing one or more sequences of one or more instructions stored in system memory **1206**, and computing platform **1200** can be implemented in a client-server arrangement, peer-to-peer arrangement, or as any mobile computing device, including smart phones and the like. Such instructions or data may be read into system memory **1206** from another computer readable medium, such as storage device **1208**. In some examples, hard-wired circuitry may be used in place of or in combination with software instructions for implementation. Instructions may be embedded in software or firmware. The term “computer readable medium” refers to any tangible medium that participates in providing instructions to processor **1204** for execution. Such a medium may take many forms, including but not limited to, non-volatile media and volatile media. Non-volatile media includes, for example, optical or magnetic disks and the like. Volatile media includes dynamic memory, such as system memory **1206**.

Known forms of computer readable media includes, for example, floppy disk, flexible disk, hard disk, magnetic tape, any other magnetic medium, CD-ROM, any other optical medium, punch cards, paper tape, any other physical medium with patterns of holes, RAM, PROM, EPROM, FLASH-EPROM, any other memory chip or cartridge, or any other medium from which a computer can access data. Instructions may further be transmitted or received using a transmission medium. The term “transmission medium” may include any tangible or intangible medium that is capable of storing, encoding or carrying instructions for execution by the machine, and includes digital or analog communications signals or other intangible medium to facilitate communication of such instructions. Transmission media includes coaxial cables, copper wire, and fiber optics, including wires that comprise bus **1202** for transmitting a computer data signal.

In some examples, execution of the sequences of instructions may be performed by computing platform **1200**. According to some examples, computing platform **1200** can be coupled by communication link **1221** (e.g., a wired network, such as LAN, PSTN, or any wireless network, including WiFi of various standards and protocols, Bluetooth®, NFC, Zig-Bee, etc.) to any other processor to perform the sequence of instructions in coordination with (or asynchronous to) one another. Computing platform **1200** may transmit and receive messages, data, and instructions, including program code (e.g., application code) through communication link **1221** and communication interface **1213**. Received program code may be executed by processor **1204** as it is received, and/or stored in memory **1206** or other non-volatile storage for later execution.

In the example shown, system memory **1206** can include various modules that include executable instructions to implement functionalities described herein. System memory **1206** may include an operating system (“O/S”) **1232**, as well as an application **1236** and/or logic module(s) **1259**. In the example shown in FIG. **12**, system memory **1206** may include any number of modules **1259**, any of which, or one or more portions of which, can be configured to facilitate any one or more components of a computing system (e.g., a client computing system, a server computing system, etc.) by implementing one or more functions described herein.

The structures and/or functions of any of the above-described features can be implemented in software, hardware, firmware, circuitry, or a combination thereof. Note that the structures and constituent elements above, as well as their functionality, may be aggregated with one or more other structures or elements. Alternatively, the elements and their functionality may be subdivided into constituent sub-elements, if any. As software, the above-described techniques may be implemented using various types of programming or formatting languages, frameworks, syntax, applications, protocols, objects, or techniques. These can be varied and are not limited to the examples or descriptions provided.

In some embodiments, modules **1259** of FIG. **12**, or one or more of their components, or any process or device described herein, can be in communication (e.g., wired or wirelessly) with a mobile device, such as a mobile phone or computing device, or can be disposed therein.

In some cases, a mobile device, or any networked computing device (not shown) in communication with one or more modules **1259** or one or more of its/their components (or any process or device described herein), can provide at least some of the structures and/or functions of any of the features described herein. As depicted in the above-described figures, the structures and/or functions of any of the above-described features can be implemented in software, hardware, firmware, circuitry, or any combination thereof. Note that the structures and constituent elements above, as well as their functionality, may be aggregated or combined with one or more other structures or elements. Alternatively, the elements and their functionality may be subdivided into constituent sub-elements, if any. As software, at least some of the above-described techniques may be implemented using various types of programming or formatting languages, frameworks, syntax, applications, protocols, objects, or techniques. For example, at least one of the elements depicted in any of the figures can represent one or more algorithms. Or, at least one of the elements can represent a portion of logic including a portion of hardware configured to provide constituent structures and/or functionalities.

For example, modules **1259** or one or more of its/their components, or any process or device described herein, can be implemented in one or more computing devices (i.e., any mobile computing device, such as a wearable device, such as a hat or headband, or mobile phone, whether worn or carried) that include one or more processors configured to execute one or more algorithms in memory. Thus, at least some of the elements in the above-described figures can represent one or more algorithms. Or, at least one of the elements can represent a portion of logic including a portion of hardware configured to provide constituent structures and/or functionalities. These can be varied and are not limited to the examples or descriptions provided.

As hardware and/or firmware, the above-described structures and techniques can be implemented using various types of programming or integrated circuit design languages, including hardware description languages, such as any register transfer language (“RTL”) configured to design field-programmable gate arrays (“FPGAs”), application-specific integrated circuits (“ASICs”), multi-chip modules, or any other type of integrated circuit. For example, modules **1259** or one or more of its/their components, or any process or device described herein, can be implemented in one or more computing devices that include one or more circuits. Thus, at least one of the elements in the above-described figures can represent one or more components of hardware.

Or, at least one of the elements can represent a portion of logic including a portion of a circuit configured to provide constituent structures and/or functionalities.

According to some embodiments, the term “circuit” can refer, for example, to any system including a number of components through which current flows to perform one or more functions, the components including discrete and complex components. Examples of discrete components include transistors, resistors, capacitors, inductors, diodes, and the like, and examples of complex components include memory, processors, analog circuits, digital circuits, and the like, including field-programmable gate arrays (“FPGAs”), application-specific integrated circuits (“ASICs”). Therefore, a circuit can include a system of electronic components and logic components (e.g., logic configured to execute instructions, such that a group of executable instructions of an algorithm, for example, and, thus, is a component of a circuit). According to some embodiments, the term “module” can refer, for example, to an algorithm or a portion thereof, and/or logic implemented in either hardware circuitry or software, or a combination thereof (i.e., a module can be implemented as a circuit). In some embodiments, algorithms and/or the memory in which the algorithms are stored are “components” of a circuit. Thus, the term “circuit” can also refer, for example, to a system of components, including algorithms. These can be varied and are not limited to the examples or descriptions provided.

Although the foregoing examples have been described in some detail for purposes of clarity of understanding, the above-described inventive techniques are not limited to the details provided. There are many alternative ways of implementing the above-described invention techniques. The disclosed examples are illustrative and not restrictive.

The invention claimed is:

1. A method comprising:

activating at least a portion of a moderator application at a computing platform configured to host a syndication of subsets of electronic messages, the moderator application being configured to filter a queue of one or more electronic messages;

receiving a user input signal configured to cause presentation of an electronic message at a user interface as a computerized tool to facilitate a moderated action of the moderator application;

detecting a first subset of values of the user input signal configured to cause presentation of at least a first portion of the electronic message in the user interface, the detecting the first subset of values is indicative that the first portion of the electronic message enters the user interface at a first edge portion of the user interface;

assigning a first state to the electronic message based on the first subset of values;

detecting a second subset of values of the user input signal configured to cause termination of the presentation of at least a second portion of the electronic message in the user interface, the detecting the second subset of values is indicative that the second portion of the electronic message exits the user interface at a second edge portion of the user interface;

assigning a second state to the electronic message based on the second subset of values; and

causing execution of instructions to perform the moderated action automatically responsive to transitioning the electronic message from the first state to the second state.

2. The method of claim **1** wherein detecting the first subset of values of the user input signal and detecting the second subset of values of the user input signal further comprises:

computing displacement of a number of pixels relative to a reference associated with the user interface; and

detecting a displacement value a function of the number of pixels to determine a transition from at least one of the first state and the second state of the electronic message to another state.

3. The method of claim **1** wherein the second state is an approved state.

4. The method of claim **3** wherein the moderated action is configured to cause assignment of the approved state automatically to the electronic message.

5. The method of claim **3** wherein the user input signal is configured to cause presentation and termination of portions of the electronic message originates from a common user input.

6. The method of claim **1** wherein detecting the first subset of values of the user input signal further comprises:

detecting the first subset of values is indicative that the first portion of the electronic message is viewable in the user interface, wherein detecting the second subset of values of the user input signal further comprises:

detecting the second subset of values is indicative that the second portion of the electronic message is not viewable in the user interface.

7. The method of claim **1** further comprising:

detecting a third subset of values of the user input signal configured to cause presentation of any portion of the electronic message in the user interface; assigning another state to the electronic message based on the third subset of values.

8. The method of claim **7** wherein the detecting the third subset of values comprises:

receiving the user input signal including data representing a reverse displacement of a number of pixels.

9. The method of claim **1** wherein assigning the first state to the electronic message comprises:

assigning the first state as an accessible state.

10. The method of claim **9** further comprising: detecting the electronic message in the accessible state.

11. The method of claim **10** further comprising: implementing the moderator application to provide another user input to assign the electronic message to a rejected state.

12. The method of claim **10** further comprising: implementing the moderator application to provide another user input to assign of the electronic message to an editable state.

13. The method of claim **10** further comprising: implementing the moderator application to provide another user input to assign of the electronic message to a forwarded state.

14. The method of claim **1** further comprising: causing presentation or implementation of a scroll-based interface element.

15. A system comprising:

a data store configured to store a moderator application in association with a computing platform configured to host a syndication of subsets of electronic messages; and

a processor configured to execute instructions to implement at least a portion of the moderator application configured to:

filter a queue of one or more electronic messages;

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receive a user input signal configured to cause presentation of an electronic message at a user interface as a computerized tool to facilitate a moderated action of the moderator application;

detect a first subset of values of the user input signal 5 configured to cause presentation of at least a first portion of the electronic message in the user interface, to detect the first subset of values is indicative that the first portion of the electronic message enters the user interface at a first edge portion of the user interface;

assign a first state to the electronic message based on the 10 first subset of values;

detect a second subset of values of the user input signal configured to cause termination of the presentation of at least a second portion of the electronic message in the 15 user interface, to detect the second subset of values is indicative that the second portion of the electronic message exits the user interface at a second edge portion of the user interface;

assign a second state to the electronic message based on 20 the second subset of values; and

cause execution of instructions to perform the moderated action automatically responsive to transitioning the electronic message from the first state to the second state.

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16. The system of claim 15, wherein the processor is further configured to:

compute displacement of a number of pixels relative to a reference associated with the user interface; and

detect a displacement value a function of the number of pixels to determine a transition from at least one of the first state and the second state of the electronic message to another state.

17. The system of claim 15, wherein the processor is further configured to:

cause assignment of an approved state automatically to the electronic message.

18. The system of claim 15, wherein the processor is further configured to:

cause presentation and termination of portions of the electronic message originates from a common user input.

19. The system of claim 15, wherein the processor is further configured to:

displace on the user interface presentation of an image of the electronic message from a first position associated with the first state to a second position associated with the second state.

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